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REVIEWS

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Philips 55in 4K TV
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projector
Arcam Movie Solo
LG multiroom
Blu-ray player

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Definitive Technology speakers
with a hidden audio secret...
Plus Stunning Samsung
4K HDR TV

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GIVEAWAY

Blown away!
We pick the very
best Blu-ray
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Awesome Atmos

Step inside a luxury movie den

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EDITORIAL TEAM

Editor Mark Craven
mark.craven@homecinemachoice.com
Deputy Editor Anton van Beek
anton.vanbeek@homecinemachoice.com
Art Editor John Rook

CONTRIBUTORS

Steve May, John Archer, Tekura Maeva, Ed Selley,
Jon Thompson, Richard Stevenson, Danny Phillips,
Martin Pipe
Photography Mike Prior, Claire Collins

ADVERTISING

Advertising Sales Executive Sonia Smart
Tel: 07710 394391
E-mail: sonia.smart@hifinews.com

Advertising Sales Executive Simon Dunn

Tel: 01689 869853
E-mail: simon.dunn@hifichoice.co.uk

MARKETING AND SUBSCRIPTIONS

UK: New, Renewals and Enquiries
Tel: 0344 243 9023
E-mail: help@hcc.secureorder.co.uk
USA & CANADA:
Toll Free: 001 866 647 9191
REST OF WORLD: New, Renewals and Enquiries
Tel: +44 (0) 1604 828 748

BACK ISSUES

www.mags-uk.com

MANAGEMENT TEAM

Group Editor Paul Miller, paul.miller@avtechmedia.co.uk
Group Sales Manager Rhona Bolger
Subscriptions Manager Kate Hall
Chief Executive Owen Davies
Chairman Peter Harkness

Published by AVTech Media Ltd

Suite 25, Eden House, Enterprise Way
Edenbridge, Kent, TN8 6HF
Tel: 0844 412 2262
From outside the UK: +44 (0) 1689 869 840

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NEXT ISSUE ON SALE: November 24, 2016



Welcome

We all dream of a dedicated home cinema where space isn't a concern; where speakers can stand metres high, screens fill an entire wall and AV amplifiers have noticeable gravitational pull. Usually, however, life isn't that easy.



Good news, then, that manufacturers are working away to create space-saving hardware. US brand Definitive Technology raises eyebrows this issue with its BP series floorstanders (p40) that integrate active subwoofers and offer a seamless connection to Dolby Atmos upfiring speakers. **Suddenly a 5.2.2 system doesn't seem quite so intrusive.** Meanwhile, Marantz's NR1607 (p48) proves that AV receivers don't need to be bulky to get the job done, and Samsung's KS8000 flatscreen (p44) shows that 4K still rewards on a sub-50in screen. If you have big ambitions but a small room, there are products out there. And you can fill that extra space with even more Blu-rays!

Mark Craven
Editor



MENU



CONTRIBUTORS



John Archer:
The UK's most experienced TV tester cut his teeth as an early HCC staffer



Jon Thompson:
Film producer and post-production expert delves deep into Hollywood and AV



Steve May:
HCC's former Editor-in-Chief is one of the UK's most respected AV journo



Martin Pipe:
Technical expert Martin is renowned throughout the home cinema industry



Richard Stevenson:
Industry veteran and former Editor of UK CE trade journal ERT



Adrian Justins:
Made his name as the editor of *What Video & TV* and *What Home Cinema*

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LG OLED TV ^{4K}



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OLED's next generation pixel construction allows for unique screen architecture which is so light and thin it can be bonded to a transparent piece of glass.

This stunning television produces an incredible picture with infinite contrast that is complemented by an innovative sound bar stand that produces superb audio.

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HDR 4K
WITH
DOLBY VISION

What the Experts Say



LG OLED55C6
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LG OLEDC6V
MAY 2016



LG OLEDE6V
JUNE 2016



LG EG960V
JUNE 2015



LG EC970V

Model shown E6

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 HISENSE Flatscreen giant teases 8K TV for next year SONY PS4 Pro 4K console arrives
 OPPO First look at debut UHD disc spinner **NEWS X10** The hottest news stories in
 bite-sized chunks **STAR TREK BEYOND** Sci-fi sequel gets 4K/Atmos release & MORE!

Epson's HDR hero

Epson EH-LS10500 → www.epson.co.uk



Epson is following its EH-LS10000 laser projector with a sequel that introduces HDR and Ultra HD Blu-ray playback to the spec sheet. Available from November priced around £6,000, the ISF-certified EH-LS10500 employs Epson's usual 3LCD reflective panel tech – combined with a dual laser light source – to deliver a claimed 1,500 Lumens brightness output and full coverage of the DCI wide colour space. Lifespan of the PJ's laser is rated at a whopping 30,000 hours. Native resolution is Full HD, although '4K enhancement' scales content to Ultra HD. Additional features are Detail Enhancement and Super Resolution tweaks; frame interpolation; 10 lens-position memory presets; and motorised zoom, focus and lens shift controls.

HCC ONLINE...

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Soundbase reborn

Cambridge Audio TV2/TV5 → www.cambridgeaudio.com



Sonic guru Cambridge Audio has revamped its Bluetooth soundbase speaker line to bolster both performance and ease of use. The optical and analogue audio inputs of the TV2 (£200) and TV5 (£300) are now joined by an ARC-capable HDMI output, while a revised DSP engine has, we're told, lowered distortion and resulted in a 'louder, crisper and fuller sound.' Onboard power has been doubled, too, and the downfiring woofers (one in the TV2, a pair on the TV5) are now housed in their own sealed enclosures. Both 'bases are available soon.



Did you hear an Echo?



Amazon Echo, the retail giant's voice-controlled smart wireless speaker, has launched in the UK priced £150. Employing a 360-degree driver array, the Echo integrates with Prime Music, Spotify, TuneIn and other services, while its Alexa voice AI is on hand to answer your questions, spout news and weather reports and read out the footy scores. The Bluetooth-capable device also works with home automation systems such as Philips Hue and Hive. www.amazon.co.uk

Damson jams with mini speakers



Damson Audio has taken the wraps off its new S-Series home audio lineup, beginning with the S-Bar soundbar and S-Woofer sub, plus S-Cube portable Bluetooth speaker. Due to start shipping in December, the range boasts an eye-catching compact design, with even the soundbar and vertically-standing sub only featuring a 25cm footprint. Even so, the S-Bar still manages to cram six drivers into its diminutive chassis. The soundbar/sub duo can be paired with other S-Series speakers for a 5.1 system. www.damsonaudio.com

Hisense TV races ahead

Screen goliath assembles mega-display for F1, outlines 8K for 2017

Chinese TV brand Hisense likes to think big. To prove the point, the company, official television supplier to Red Bull Racing, has installed a huge LED display in the team's state-of-the-art Operations Room in Milton Keynes.

Not your average bigscreen telly, this bespoke display measures 9.6m x 3.6m and is made from 288 individual 14-bit colour panels, each driven by its own power supply. The giant display reputedly took nine days to assemble. 'We were approached to provide a unique solution for Red Bull's newly-created Ops Room,' explains Hisense UK deputy managing director Howard Grindrod. 'I think it fits the bill.'

HCC was invited to view the monster display and it is, indeed, stunning. Effectively a video wall, it relays track data and video feeds from Formula One Management, as well as PIP windows of F1 coverage from Sky UK, Sky Deutschland and Sky Italia.

Away from F1, football-watching home cinema owners will have been intrigued to see Hisense touting 8K UHD in the form of promotional messages in stadiums during its UEFA European



Howard Grindrod: 'An 8K screen would be a good halo product for us... But availability? It's down to software to support it'

Championship sponsorship. So does this mean Hisense intends to lead the way with the screen tech?

'8K? That's interesting,' muses Grindrod somewhat mischievously. 'Let's see, next year... yes, we have 8K technology.'

Hisense, of course, is typically under-selling. The company unveiled a 98in 7,680 x 4,320 panel, dubbed the MU9800U, at CES earlier this year. This ULED prototype features a so-called Black Crystal Panel for extreme HDR contrast. It's clear what display technology the manufacturer intends to develop going forward.

'We have no plans for OLED,' states Grindrod. 'We're sticking with ULED – and, yes, an 8K screen would be a good halo product for us. Our core excellence is vision after all.'

'We show things because we can, because it shows we've got our mind on the next stage of development. But availability? It's down to software. We need that to support it', he says.

'The more immediate challenge is helping buyers understand the benefits of 4K and HDR.'

One new area Hisense will soon accelerate into is soundbars. The company is expected to launch its first models early 2017. 'We have products on test at the moment,' Grindrod tells HCC.

'The quality of sound we already achieve in our TVs is very good,' he adds. Hisense currently licenses a range of audio DSP solutions from US sound specialist THAT Corporation, including Total Volume and Total Surround, for its sets.

'You have to be very careful when you're entering into a new market,' says Grindrod. 'We need to have the credibility to enter that space, so we are working with companies with strong sonic credentials.'



Is Hisense already on the fast-track to 8K TV tech?

Playlist...

Team HCC spins up its disc picks of the month

Captain America: Civil War 3D (Region B BD)

While the 2D Blu-ray is superb, this stereoscopic platter is the only way to see the awesome airport brawl (shot using IMAX digital cameras) in its full 1.85:1-framed glory.



Ash vs Evil Dead: Season One (R2 DVD)



This 10-episode compendium of gore and gags is a must-see for fans of the *Evil Dead* films. As the man himself would say: groovy!

The Flight of the Phoenix (Region B BD)



A well-preserved 1080p encode ensures that Robert Aldrich's 1965 survival drama doesn't crash and burn on Blu-ray.

Halloween [1978] (Region B BD)



John Carpenter's Steadicam-filled 2.35:1 photography and foreboding score make this a Halloween treat.

Forbidden Planet (All-region BD)



The 1956 sci-fi classic receives a welcome HD re-release as part of Warner Bros' Premium Collection.

At the 'plex...

Heading out to see a flick?
Catch these this month

Doctor Strange

Out now: The cinematic debut of Marvel's Sorcerer Supreme had its release date bumped forward and arrived in UK cinemas just before this issue hit the stands. Get down to your local multiplex for a magical bigscreen experience.

Arrival

November 17: Canadian director Denis Villeneuve follows up the superb *Sicario* with this 'first contact' sci-fi thriller starring Amy Adams, Jeremy Renner and Forest Whitaker.

Fantastic Beasts and Where to Find Them

November 18: Get ready for some more movie magic in the coming weeks as this long-awaited *Harry Potter* spin-off arrives. Set in 1929, the film follows Newt Scamander (Eddie Redmayne) as he goes on the hunt for dangerous creatures in the United States.

Summit celebrates 4K

UHD Blu-ray still on track for success, despite Disney's ongoing absence

September saw more than 300 delegates from the home entertainment industry gathering at London's Picturehouse Central cinema for the annual BASE (British Association of Screen Entertainment) and MESA (Media & Entertainment Services Alliance) Entertainment Summit. Naturally, *HCC* grabbed a seat, too.

The one-day trade event witnessed senior figures from around the world delivering key-note speeches and taking part in panel discussions designed to address the current state of the home entertainment market, as new technologies and distribution methods rewrite the rulebook.

Despite a few concerns regarding catalogue sales and finding the best price for digital releases, the outlook among attendees was largely positive. Indeed, a common theme throughout the day was pleasure at the resilience of physical media in the face of the growing digital offering – the UK market grew to £2.24bn in 2015, with discs just outselling digital by 52 to 48 per cent.

Success in the States

As far as industry cheerleading went, however, nothing could top the enthusiasm reserved for Ultra HD Blu-ray. Kicking off his presentation with a flashy 'sizzle-reel' created to sell the format at retail in the US, Victor Matsuda, Chairman of the Blu-ray Disc Association's Global Promotions Committee, was keen to hail the format's rapid success in his native America.

'This time last year we were a month beyond the BDA's announcement that licensing had started for 4K



Victor Matsuda: 'All countries are trending extremely similarly with 4K TV sales, which is creating a very strong need for content'

UHD Blu-ray. One year on and there are five players on the market and – as of the end of August – there are 63 titles available on Ultra HD

Blu-ray in the States,' announced Matsuda.

The BD bigwig was also keen to stress that the success of the format would not be limited to the US. 'All countries – all regions – are trending extremely similarly when it comes to 4K UHD TV sales, which is creating a very strong need for appropriate content.'

Matsuda was less forthcoming when it came to direct questions from *HCC* about Disney's current absence from UHD BD ('it's up to individual rights owners to decide when the time is right for them...')

and whether the lack of Dolby Atmos/DTS:X playback on the Xbox One S console was a missed opportunity ('I'm not really in a position to answer that...').

Awareness of the format is strong, according to Samsung's Director of Product Planning, Dan Schinasi. In a panel about 4K tech, he claimed that US research shows '50 per cent of those polled were aware of 4K TV – and of that 50 per cent, 75 per cent were aware of Ultra HD Blu-ray.'

Positive messages, then, but there's more work to be done to ensure UHD BD takes off in the UK and doesn't remain a niche format like its predecessor.

Samsung's Dan Schinasi (second from right) joins the 4K debate



Envisioning a 2.1-channel future

Onkyo boosts its home cinema lifestyle range with compact new system

Onkyo is adding a 2.1-channel audio package to its Envision Cinema range of slick-looking components. The LS5200 partners a slender network stereo receiver to a pair of satellite speakers and a wireless subwoofer.

The stereo receiver delivers 2 x 85W of amplification with phase-matching technology to 'guarantee a cohesive stereo image'. But it's not all audio – the unit also offers 4K upscaling, while the four HDMI inputs/one output support HDCP 2.2, HDR and 4K passthrough. There's also support for AirPlay, Google Cast, Spotify, Wi-Fi and Bluetooth.

The bundled satellite speakers (dubbed SKM-648) each employ a 3in cone woofer and 1in dome tweeter. Meanwhile, the SKW-B50 wireless subwoofer uses a bass-reflex design with a 6in downward-firing cone.

Onkyo has also included FireConnect technology to transmit to optional wireless speakers around your home. Multiroom control is enabled via a smartphone app.

The LS5200 system is available in a choice of black or white finishes, priced £750. www.uk.onkyo.com



Emit.

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The new Dynaudio Emit series is the latest model range from Dynaudio and was conceived as an entry level high end loudspeaker series incorporating extraordinary levels of performance and technical innovation in an attractive package suitable for almost any level of home cinema amplification.

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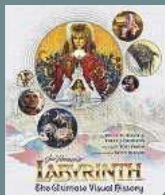
Listen to the new Emit Series.

DYNAUDIO

Extras...

Small items that could make a big impression...

Labyrinth: The Ultimate Visual History



Released to coincide with the 30th anniversary of Jim Henson's '80s fantasy film (and its debut on Ultra HD Blu-ray), this wonderful £35 hardback goes into terrific detail in charting how it all came together. Along the way you'll get to read abandoned story ideas and in-depth interviews with those involved in the film's creation, all lavishly illustrated with hundreds of rare sketches and photographs.

R2-D2 Life-Size Figure



Fancy giving everybody's favourite Astromech droid a place in your movie den? Now you can with this new, limited edition life-size model from Sideshow Collectibles. Boasting screen-accurate remote control-triggered lights and sounds, and due to ship next Spring, this R2-D2 replica stands 48in tall and will retail for a wallet-bothering \$7,450.

Marvel: Absolutely Everything You Need to Know...



While its packed design and scattershot approach to fonts makes it more suitable for younger readers, this fun hardback is still packed with informative tidbits and quirky facts about your favourite Marvel comic book superheroes and villains (not to mention plenty of less well-known characters). Grab it for £18.

Philips embraces Atmos

Plug 'n' play Fidelio B8 is the world's most affordable 3D audio soundbar

Philips has become the latest manufacturer to squeeze Dolby Atmos technology into a soundbar. Undercutting rival Atmos 'bars from Yamaha and Samsung, the £900 Fidelio B8 is the first to offer an all-in-one 3D audio solution for less than a grand.

The B8, which is partnered by a wireless subwoofer, relies on angled top- and side-firing drivers to create its immersive soundstage. Despite being just 53mm tall, there are in total 18 speaker drivers onboard. Employing a mix of Philips' proprietary Ambisound technology with Atmos decoding, the B8 claims to deliver a 5.1.2 surround sound experience.

To learn more, HCC had a hands-on with the system at brand owner Gibson Innovations' London HQ.

What's under the hood?

Of those 18 drivers, 10 (twin 'race-track' units and six tweeters) are top-mounted to create height-channel effects that reflect off a ceiling. Two more are housed at opposing ends of the bar for a wide dispersion, while there are six front-facing mid-range units, two assigned to centre channel duty that do a fine job enhancing dialogue clarity.

The subwoofer – a sizeable beast, itself – features a 220W amplifier and 8in downward-firing driver. A dome-shaped bass reflector is used to reduce localisation. Philips rates the total sonic output of the package at 400W.

As you'd expect considering the price point, the B8 supports Bluetooth aptX streaming and NFC, and HDMI connectivity (two inputs and one output). However, all HDMI are v1.4 and so do not support 2160/50 or 60 fps, or HDCP 2.2 copy protection.

Other connections are optical and coaxial digital audio inputs and a 3.5mm line input.

The system itself is simple to use, with no calibration EQ to setup. The only user configuration,



Darren Judd: 'There's been a growth in soundbars, but they have to compete for space with STBs, DVD decks and consoles'

explains System Architect Roel Reusens, is the amount of volume you can assign to the up-firing drivers. 'We are working on an algorithm to offer more control, but it's not in this soundbar,' he told HCC.

The B8 also sports an onboard DTS 5.1 decoder, but doesn't cater for DTS:X.

Big demand for small 'bar

The B8 isn't the only new soundbar coming from the Fidelio team this Autumn. It'll be joined by the B1 Nano Cinema Speaker, a 320W 41cm sound-slinger and sub package, priced at £450.

'We've done a lot of research and found there's a demand for a smaller footprint,' explains Marketing Manager Darren Judd. 'There's been a growth in soundbars but they have to compete for space beneath a TV with Sky boxes, DVD players and games consoles. One of the concerns about a compact format is how do we get a good soundstage. We think the answer is the B1.'

To achieve the desired performance from such a small cabinet, Reusens reveals Philips has introduced 'microbeaming.' The mini-bar features four drivers, two which are angled outwards to the side, plus two cross-firing at the front. 'This creates a sweetspot of 180 degrees. We also apply different DSP processing on every channel.' There are two additional waveguided tweeters in the top of the unit.

As with the B8, the B1 is Bluetooth and NFC enabled, but only has a single (ARC-capable) HDMI.

The Nano Cinema Bar also comes with an ultra-slim wireless subwoofer that can be placed horizontally under a sofa. 'We've nicknamed it the sofa sub,' says Judd.



The B8 soundbar employs multi-facing speaker modules to create its Atmos sonics

This month's top 10 news stories in handy, bite-sized chunks...



1 ATC takes centre stage

Already a favourite with hi-fi fans, speaker maker ATC is targeting home cinema owners with a pair of dedicated centre channel models. Designed to match its SCM7 and SCM11 monitors, the new C1C and C3C centres sell for £680 and £1,040 respectively. Additionally, two complete 5.1 packages are also available – the £3,250 C1 System (4 x SMC7, 1 x C1C and 1 x C1 Sub), and £3,925 C3 System (2 x SMC11, 2 x SMC7, 1 x C3C and 1 x C1 Sub). Look for a review of the C1 System in the next issue of *HCC*.

2 Retailer puts on McIntosh

Luxury audio retailer KJ West One is adding high-end marque McIntosh to its list of brands. The Mayfair store will showcase a range of the US company's hardware within its two-floor, 3,000ft² showroom.

3 *Revenant* pirate fined \$1m

William Kyle Moriarty, the former Twentieth Century Fox employee who pled guilty to leaking screeners of *The Revenant* and *The Peanut Movie* online before they were released in cinemas, has been ordered to pay \$1.2million in restitution to the studio. While prosecutors also recommended jail time, Moriarty will instead receive eight months of house arrest, followed by two years of probation, due to family circumstances.

4 Pure radio business sold

UK-based Imagination Technologies has sold off its loss-making Pure digital radio business to Australian company AVenture AT for £2.6m. 'I would like to thank the staff of Pure for their contribution to Imagination over the years and wish them, and Pure's new owners, well for the future,' stated Imagination boss Andrew Heath.

5 BBC iPlayer to require ID

The Beeb has revealed that from next year anyone who wants to use BBC iPlayer will have to register with a BBC ID account. Despite the fact that this requires a postcode, the BBC insists it will not be employed to crack down on people using the service without a valid TV licence.

6 Piracy still a problem in UK

The Intellectual Property Office's recent IP Crime Report 2015/16 makes for some pretty grim reading for those concerned about online piracy. A UK poll taken over a three-month period last year saw 28 per cent of those questioned admit that their music downloads come from illegal sources, with 23 per cent of films, 16 per cent of TV shows and 15 per cent of games also being downloaded in breach of copyright. Naughty.

7 Tannoy gains new leadership

Music, parent company of UK speaker brand Tannoy, has appointed James Bradbury as the new vice president to lead its Lifestyle Division. 'My priority is to re-invigorate Tannoy into a 21st century business... It's a privilege to be working with such a revered brand,' gushed Bradbury.

8 Split-screen soccer

A recent firmware update for the Sky Q box includes a nifty feature allowing sports fans to watch two live streams side-by-side. Or, instead of watching two football matches at the same time, Sky Sports Q customers can also use the split-screen mode to view replays without missing any of the action.

9 Sports fans stay home alone

In other sports-related news, a recent survey from projector manufacturer Epson claims that the vast majority of Brits (65 per cent) stayed home to watch this Summer's major sporting events by themselves, rather than having friends around to share in the fun (nine per cent) or going down the pub to watch them (four per cent).

10 'That's no moon...'

The Empire's most destructive weapon has been turned into one of the most eye-catching desktop speakers around. The officially-licensed Star Wars Death Star Levitating Bluetooth 4.0 Speaker will set you back £150 and uses the Force (well, Maglev magnetic forces) to 'hover magically' above the base unit, where it will float, spin and pump out banging tunes. Visit www.thefoundry.com for more information.



Premiere...

What's happening in the world of TV and films...

It's a Mini adventure



Rev up your Mini Cooper: iconic '60s caper *The Italian Job* is getting a TV do-over. Having already given us a bigscreen US remake back in 2003, Paramount is developing an *Italian Job* TV series for NBC. The show is described as a 'noisy, sexy thrill-ride that follows a make-shift family of expert criminals who are forced out of retirement.' A bit like Team HCC.

King of the jungle

Jon Favreau has been tapped by Disney to direct its upcoming live-action version of *The Lion King*. The fact that his re-imagining of *The Jungle Book* pulled in \$966m for Disney at the worldwide box office this year no doubt played a big part in the studio's choice.

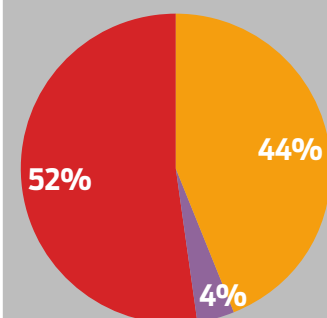
Smallscreen Hitch

Chris Columbus is set to direct the pilot of a new TV anthology series called *Welcome to Hitchcock*. The show promises to re-imagine classic Hitchcock tales for the smallscreen, and will feature a new season-long mystery or crime each year.

We asked...

Has the lack of UHD BD put you off buying a PlayStation 4 Pro?

- Yes... I'll stick with the Xbox One S
- No... It's all about the 4K gaming
- Meh... I didn't want one anyway



Results from www.homecinemachoice.com
Go online for more polling action



To boldly go in 4K

Star Trek Beyond → Paramount Pictures
→ Ultra HD Blu-ray, All-region BD and 3D BD

Sci-fi sequel *Star Trek Beyond* will beam into home cinemas on Ultra HD Blu-ray, Blu-ray and 3D Blu-ray on November 21. The Justin Lin-directed flick will be joined by Dolby Atmos sonics (on all versions), plus a cargo bay of bonus bits including featurettes, deleted scenes, a look back at 50 years

of *Star Trek* and tributes to Leonard Nimoy and Anton Yelchin. Additionally a trilogy boxset adding *Star Trek* (2009) and *Star Trek Into Darkness* will be available, but featuring Full HD BDs rather than collecting the existing UHD releases together.



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York: Wall of Sound, wallofsound.co.uk



Face to Face

Topics of discussion on the HCC Facebook page

After Oppo announced its 4K Blu-ray spinner...



I'll be keeping a close eye on this!
Ed Hughes

Any Dolby Vision? Otherwise it's pointless buying it now.
Mark Bridle

Too expensive. I will be staying with the regular Blu-ray format for the foreseeable future.
Frank McDonnell

The options are so limited on this format.
Mike Wadkins

What you're watching on your home cinema...

Currently enjoying my new Epson EH-TW9300 PJ. Demo discs ahoy!
Barrie Head

Watched *The Matrix*,



a great movie. Won't bother watching the other two.

Jeffrey McCann

Nothing. My nine-year-old Onkyo AV receiver has given up the ghost. Not a happy chappy.

Brett Gidlow

Aliens, because it's celebrating its 30-year anniversary and it's a brilliant rollercoaster of a movie.

Richard Chapman

The Conjuring 2.

Chalky Az

Batman: Killing Joke.

John Linford



The Dark Knight Rises, with IMAX footage which looks great on the bigscreen.

Patrick Peeters

Taken 3 and *Captain America: Civil War*. Get in!

Tony Sharrock

Join in the fun



Like our page at facebook.com/HomeCinemaChoice

Back of the 'net

Trailers, technology and more to check out on the web



Ahoy there!

The fifth part of the *Pirates of the Caribbean* series (*Dead Men Tell No Tales*) doesn't sail into cinemas until next Summer, but Disney has released an early trailer to put a shiver in your timbers. Johnny Depp's Captain Jack Sparrow is absent here – but you get to meet the new bad guy instead.

youtu.be/1xo3af_6_Jk



A load of balls

Sony harks back to its iconic TV advert featuring balls rolling through the hills of San Francisco with this promo for its 4K sets (here in its full glory). What happens? A multitude of balloons fill up an abandoned building, go 'pop', and unleash colourful glittery innards – alluding to the impact of HDR...

youtu.be/_gYdwWxSXBm



Cursing through the snow

Remember the 2003 comedy *Bad Santa*? Well, Hollywood does, as it's rustled up a sequel in time for Christmas. Once again Billy Bob Thornton stars as the thieving Father Christmas impersonator, and once again (if this trailer is to be judged) it looks very rude and very funny. In cinemas November 25.

youtu.be/Uw7Om5fn38Q



Drawing blood

The Coen brothers' debut crime flick *Blood Simple* has been given a deluxe BD release Stateside by Criterion Collection. This insightful five-minute vid overlays the original storyboards with the finished movie, and is joined by a commentary by the duo and cinematographer Barry Sonnenfeld.

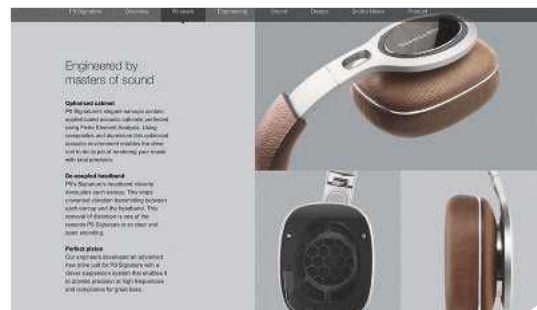
youtu.be/MsGRhaPpGh0



What's the score?

Fascinating fifteen-minute feature from movie experts Every Frame a Painting analysing why no one can remember the original scores in Marvel flicks, before branching out into the dangers of using 'temp tracks' during production. Ever noticed that *Thor* and *Transformers* sound similar?

youtu.be/7vfqkvwW2fs



Headphone heaven

Bowers & Wilkins has unleashed a new pair of premium cans to celebrate the company's 50th anniversary. The P9 Signature headphones sell for around £600, feature new driver designs and all manner of luxury refinements including an Alcantara carry case. Follow the link for more info.

<http://bit.ly/2dbGTyn>

Pro-grade gaming?

Sony PlayStation 4 Pro → www.playstation.com



Sony's PlayStation 4 Pro console is hitting stores on November 10, promising superior gaming compared to its predecessor courtesy of 4K/60p and HDR support – although the in-built disc drive won't play Ultra HD Blu-ray platters. Compatible with existing PS4 games, the £350 machine packs a 1TB hard drive and 4.2 teraflop GPU, super-speed USB 3.1 inputs and, naturally, supports wired, wireless and Bluetooth networking. And while it's clearly a target for 4K TV owners, Sony promises improved gameplay on 1080p sets, too.



Oppo rocks up early to 4K party

The UDP-203 is the brand's first new disc player in three years, adding UHD playback to its universal ethos, and teasing Dolby Vision potential. **Mark Craven** reports

OPPO IS A company that has amassed something of a cult following amongst AV fans. Its Blu-ray player line, dating back to 2009, has consistently impressed by virtue of a focus on build quality, strong AV performance and some interesting (although not always essential) features.

Yet Oppo's range has been in a holding pattern of late, with the BDP-103D and flagship BDP-105D in place since 2013. Brand fans have been waiting patiently for a 4K Ultra HD upgrade. What's perhaps surprising is that it's set to arrive barely a year into the format's life.

The company says it never aims to be 'first with something,' preferring to bide its time with R&D and extensive beta testing. The fact that it's pipping both Sony and LG to the Ultra HD Blu-ray player market is therefore surprising, although perhaps more of a sign of trepidation on the part of those two AV giants than of a headstrong rush by this more smallscale corp.

Mr Universe

Oppo's debut Ultra HD Blu-ray player is the UDP-203, available later this year

tentatively priced at £599. HCC attended its UK launch at, of all places, the home of Bath Rugby Club (Oppo is one of its sponsors). The setting felt kind of apt, though, as the player aims to be a heavyweight in the nascent 4K deck market. A full-width design, the machine offers Super Audio CD and DVD-Audio playback in addition to UHD BD, BD, DVD etc, plus support for user-generated 4K content, and hi-res audio playback.

That 'universal' status marks it out against current rival machines from Panasonic and Samsung, and means existing Oppo owners can upgrade without losing out on format support they've previously enjoyed. Furthermore, it wouldn't be a surprise to find modded versions, offering multiregion/multizone DVD and Blu-ray playback, appearing on the market.

At the heart of the player is a new SoC (System on a Chip) jointly developed with Taiwanese silicon specialist MediaTek. Dubbed the OP8591, this quad-core chipset promises the 'most advanced image processing available.' Intriguingly, the power of the new SoC means Oppo is confident enough to suggest that, as well as the HDR 10 standard employed by 4K Blu-ray, support for 'additional HDR formats is possibly forthcoming.'

'We are in talks with Dolby,' reveals Oppo Digital's technical officer James Soames, alluding to future Dolby Vision playback. 'The disc situation is fraught... the chipset is capable, but the player needs certification.' Not an outright confirmation, then, but something that may sway buyers

The UDP-203 features a new user interface with scenic backgrounds





Oppo Digital's James Soames:
'We are in talks with Dolby...'



The player features a 7.1 analogue output for old-school AV setups

(particularly those who have already invested in a Dolby Vision-enabled LG 4K screen) that are wary of the potential for a souped-up Blu-ray standard to materialise if Dolby can gather studio support for domestic releases.

On the audio side, the chip is joined by an AKM4458 32-bit eight-channel DAC, which is pegged to support hi-res audio up to 384kHz/24-bit, and stereo and multichannel DSD feeds.

Design-wise, the UDP-203 shares a similar style to Oppo's existing BDP-103D Blu-ray spinner. A brushed aluminium front panel, steel cover and metal chassis ensure a robust build – 'this is more solid than its UHD peers,' boasts Oppo – and a custom-made disc-loader promises fast, error-free playback.

Connections include dual HDMI outputs (one v2.0a for 4K video payout, the other v1.4 for a split-off audio signal) and a 7.1 analogue output stage for use with legacy AV receivers without HDMI support. There's also an HDMI 2.0 input so external sources can be fed through the deck and make use of its AV processing, plus a trio of USB ports. Ethernet and Wi-Fi are also onboard.

Bye bye Darbee

The player isn't, however, a straight-up clone of the BDP-103D with added 4K wizardry. In terms of features, gone is Darbee's Visual Presence video post-processing, and there's now no access to video-on-demand platforms either. While the latter is unlikely to concern 4K TV owners already enjoying

access to the likes of BBC iPlayer, Netflix and Amazon Video, it might annoy 4K projector owners, who will need to source elsewhere. As for Darbee, Soames explained that the company's long-awaited 4K algorithm isn't yet finalised.

When asked if a second-gen Oppo UHD model with Darbee processing integrated could arrive, he replied: 'I hope so. I like it.'

The absence of both Darbee and onboard streaming clients is probably a factor in the player achieving a price point that matches that of Panasonic's DMP-UB900 competitor.

Early demonstrations of the UDP-203 highlighted a newly-designed user interface, which combines pretty background images with a simple row of menu options. The backlit handset appears broadly similar to previous efforts, only with dedicated HDR mode buttonry.

When it came to a UHD Blu-ray, running profane superhero outing *Deadpool* on an LG E6 OLED TV was perhaps not the best advert for the high impact of 4K HDR material (the film is quite dark, as is the TV...) but imagery appeared packed with detail and super-smooth. And viewed up close, the player is gorgeous.

So is the UDP-203 Oppo's new top-dog deck? Not quite. Soames also confirmed a step-up machine (likely called the UDP-205) is on the roadmap, and could launch 'maybe this year, maybe next'. As with the previous BDP-105D, this should be a more audiophile-centric offering. Specifications remain under wraps for now, though... ■

Oppo speaks!

Brand also has multiroom speaker range lined up

As a side dish to the main 4K player launch, Oppo also announced the UK arrival of its Sonica Grand and Sonica multiroom speakers, plus the Sonica DAC/music streamer. The new hardware joins its growing audio stable, which includes the PM headphones and dedicated headphone amps.

The Sonica Grand takes aim at rival high-end multiroom speakers, carrying a £700 price tag and a sizable design. Engineered by the same team behind Oppo's planar magnetic headphones, the speaker uses 150W of amplification spread across seven drivers: three woofers (1 x 5.25in, 2 x 3.5in side-firers), two planar ribbon tweeters and a pair of midrange units. They're arranged in a stereo array, although it can be set up as a left or right channel in a two-speaker system.

Control comes via the Sonica app (plus a few on-body buttons), which integrates Spotify and Tidal streaming – 'the two most important services', according to Oppo. Connections, beyond Wi-Fi, are AirPlay, Bluetooth, USB and an aux port.



Stepping down a level is the £300 Sonica speaker. Aimed at smaller environments and featuring five drivers (two of which are passive), this also interfaces with the Sonica app for multiroom installations.

The Sonica DAC, meanwhile, is aimed at hi-fi heads with a separates system. Priced at £800, it packs an asynchronous USB for PC hookup, toroidal power supply, DLNA, AirPlay and Bluetooth streaming, and support for hi-res formats up to DSD 11.2MHz.

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Raiding the Hollywood vault

UK Blu-ray label Indicator has started life by securing UK hi-def debuts for some much-loved classic movies. **Anton van Beek** quizzes the man with the plan

WHILE MAJOR STUDIOS prove adept at handling home media releases for their modern blockbuster titles, there's a growing stable of independent labels bringing much-loved catalogue titles, plus more smallscale releases, to Blu-ray in the UK.

Newest to the scene is the Indicator imprint from Powerhouse Films, which has hit shelves recently with John Carpenter's *Christine* and Brian De Palma's *Body Double*. Following soon will be releases for Sidney Poitier vehicles *Guess Who's Coming to Dinner* and *To Sir, With Love*, cult 1981 slasher flick *Happy Birthday to Me*, the Richard Attenborough-starring serial killer drama *10 Rillington Place* and Hal Ashby's *The Last Detail*.

Prior to getting our mitts on the first two Indicator Blu-ray releases (see p24 for more),



John Morrissey: the powerhouse behind Powerhouse Films



INDICATOR

we chatted to Powerhouse Films founder and director John Morrissey.

First up: what's your background in the movie industry?

I've been in the home entertainment industry since 1983. My first job was with MGM/United Artists, after which I worked with Vestron Home Video for over four years. I then spent 10 years as the sales and marketing director at Columbia Tri-Star, which then became Sony Pictures.

So why launch Powerhouse Films and the Indicator label?

It's an idea I've been developing for many years, but due to other work commitments it wasn't possible

for me to set up the company until now. The ethos is to offer the best possible Blu-ray editions to people who are genuinely passionate about film.

I think working for a Hollywood studio for so many years was at times very frustrating. It was sometimes difficult to explain to the people in Los Angeles, who were not close to the UK market, about changes we would like to implement, which would benefit us enormously. Occasionally they would see our view point, but a lot of the time, they didn't. Now we can really deliver what the fans want, without having to get that approval.

What makes this the right time to launch a new label?

Over 30 years, I've seen the highs and lows, but the exciting thing now is that we're seeing a very definite shift in the market, with film fans and collectors demonstrating that they have an appetite for releases from labels who offer carefully-produced editions of classic films and less well-known titles. We hope to earn their trust and to be able to continue to deliver the kind of product they demand.

You're starting with UK Blu-ray debuts for John Carpenter's *Christine* and Brian De Palma's *Body Double*. Why kick things off with these?

Well, Carpenter and De Palma are modern masters of cinema, and these films are amongst our favourites from their filmographies. It's a privilege to be able to work on these titles, and to be responsible for presenting them on Blu-ray in the UK for the very first time.

What other titles can we expect?

I don't think we have the time here to cover all that we have. All I can say is that we've over 80 films lined up, and that fans of Ray Harryhausen and Hammer will have a great deal to look forward to...

All titles announced to date have been licensed from Sony Pictures UK. Are you also looking to set up similar deals with other studios?

Yes, all the titles so far are from the Sony/Columbia studios, but we are working on a range of other licensing deals.

What's the reasoning behind doing limited edition runs for each title?

I'm sure our reasoning is much the same as for BFI and Arrow, and other labels that do the same. Costs for releasing the kind of high-quality editions we're striving to produce are not inconsiderable, so we are trying to find the best model to ensure that we can deliver on our ambitions.

How important are extra features to the DVD/Blu-ray experience?

If they're well made, they are a huge part of the experience, and key to the ethos of the Indicator label. We've already commissioned a huge number

of new interviews with the actors, directors and producers of the films we are releasing in the first four months of next year, and are actively researching and sourcing archive materials, too.

And what about ensuring high-quality encodes?

This is as high a priority as it gets for us. As you rightly point out, it's Powerhouse Film's reputation that's at stake.

We're spending time and effort getting this key part right, and we have a fantastic team in charge of all the assets, who have worked on some very major products. They certainly know what our requirements are, and they aren't happy unless they deliver to that standard.

How responsive have you found larger studios to the idea of licensing their catalogues?

It definitely helped that I had been with a major studio for over 10 years, but the real focus for Sony Pictures is their new-release product, which generates the bulk of their income. Catalogue sales are a little down the pecking order I'm afraid. I think it's up to Powerhouse Films now to try and change that perception, and so far so good.

Can you see Indicator investing in its own restorations as several other indie labels now do?

As we dig deeper into the Sony catalogue, we are finding some difficulty in finding good HD materials, so we are already looking into ways we can create new masters for Blu-ray. It's an expensive process, but we're dedicated to making films which have long been out of circulation available in the best possible editions.

Do you have any particular passion projects in amongst the titles that you're currently working on?

There's not one particular title that I'm more passionate about than any of the others, but we are looking forward to working on the Ray Harryhausen package, along with the Harryhausen Trust. We have five of his remarkable films; I think we are going to have something really special to show his fans. We also have a great raft of Hammer Films, some extremely rare.

Do you encourage people to get in touch with suggestions for titles they'd like to see you rescue from the vaults?

Absolutely, we love hearing from fans – it's a privilege to have had so many people contact us ahead of our first releases. The response to our recent announcement was really overwhelming, and we have been sent so many great suggestions – all of which we have fully taken on board.

Okay – can we make a request for the 1988 remake of *The Blob*?

The Blob is now on that list, too! ■



To Sir, With Love hits Blu-ray on Nov 14



The Last Detail weighs anchor on Dec 5



Wish a Happy Birthday to Me on Dec 5



Indicator makes eye-catching use of original poster art for its BD sleeves



King of the killer car movies

New label races into pole position with a deluxe release of this '80s auto-terror

→ CHRISTINE: LIMITED EDITION

Forget Herbie. When it comes to autonomous automobiles they don't come any better than Christine. This demon-fuelled, blood-red 1958 Plymouth Fury is the star of John Carpenter's slick 1983 movie adaptation of the Stephen King novel about a high school nerd (Keith Gordon) whose life is turned around when he becomes her latest owner. Trouble is, Christine has a mind of her own and is a very jealous lady...



Picture: This UK release of *Christine* is based on the same 2K restoration that has already served as the basis of Blu-ray editions in several other territories.

Without having all of the different versions to hand, it's impossible to say that this release outpaces them all, but compared to Sony's own German disc, Indicator's AVC 2.40:1 1080p encode shows a slight uptick in grain structure and contrast.

Audio: The disc includes both an LPCM 2.0 version of the film's original stereo track, plus a DTS-HD MA 5.1 upgrade. While we'd typically recommend the former in these instances, the surround remix works rather well, with some improved atmospheric effects and extra bass rumble from Christine's engine.

Extras: The commentary by Carpenter and star Keith Gordon, three-part *Making of...* (48 minutes) and 20 deleted scenes from the old DVD are all present and correct. Joining them on Indicator's Blu-ray are an isolated LPCM 2.0 presentation of Carpenter's score, two trailers, two TV spots and a gallery of 33 photos.

Limited to 5,000 copies, the release comes bundled with a 24-page booklet featuring a new essay on the film and an archival 1996 article in which Carpenter picks his cinematic guilty pleasures.



Alexandra Paul experiences Christine's idea of auto(mobile) asphyxiation

HCC VERDICT

Christine: Limited Edition

→ Powerhouse Films – Indicator
→ All-region BD & R2 DVD → £23

WE SAY: Top-notch visuals and audio make this UK debut for Carpenter's chiller well worth a drive

Movie: ★★★★★

Picture: ★★★★★

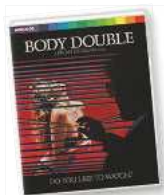
Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

Lurid flick brushes up nicely on Blu

4K restoration ensures that Brian De Palma's controversial erotic thriller impresses in hi-def



→ BODY DOUBLE: LIMITED EDITION

Brian De Palma took his love of all things Alfred Hitchcock to the extreme with this nutty 1984 thriller that raised the heckles of moral guardians on its original release.

Coming across like the sultry offspring of *Rear Window* and *Vertigo*, the film stars Craig Wasson as a claustrophobic actor who witnesses the murder of the sexy neighbour he's been spying on while house-sitting for a friend. But can he really trust what he saw? And why does adult movie star Holly Body (Melanie Griffith) suddenly seem so familiar to him?

Simultaneously stylish and sleazy, *Body Double* may not be De Palma's strongest film, but it's arguably the perfect snapshot of his career and works even better now than it did back in 1984.

Picture: Based on a 4K makeover overseen by restoration maestro Grover Crisp, *Body Double* looks nothing less than sensational on Blu-ray. While we haven't seen the well-reviewed platter released by Carlotta in France last December, it's hard to believe that it could offer anything better than the pristine,



Melanie Griffith's performance scored a National Society of Film Critics award

wholly film-like AVC 1.85:1-framed 1080p encode that takes centre stage here.

Audio: The Blu-ray houses the original stereo mix (LPCM 2.0) and a 5.1 remix (DTS-HD MA). Both sound clean and do a particularly impressive job with Pino Donaggio's memorable score.

Extras: Again limited to 5,000 copies, this BD packs an archival TV interview with Craig Wasson, an LPCM 2.0 isolated score, four archival featurettes, the 38-minute Pure Cinema retrospective documentary that appeared on the Carlotta Blu-ray, the trailer and a gallery of 71 photos. A 40-page booklet with new and archival musings is also included.

HCC VERDICT

Body Double: Limited Edition

→ Powerhouse Films – Indicator
→ All-region BD & R2 DVD → £23

WE SAY: A stunning HD presentation of Brian De Palma's brilliantly bonkers 1983 thriller

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★



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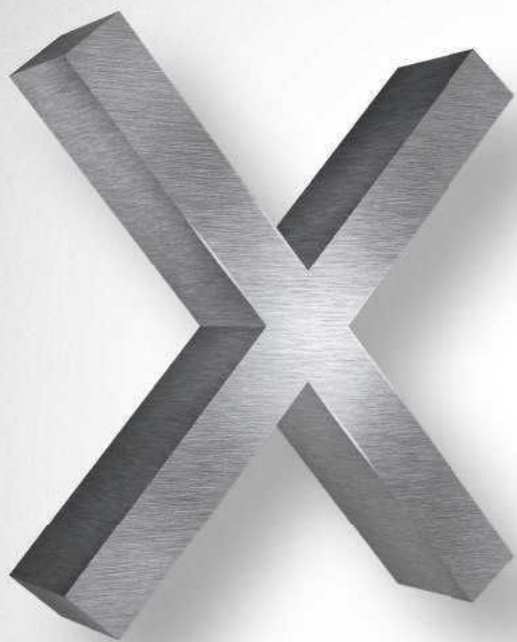
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Team HCC browses its disc shelf to pick out the recent Blu-rays that guarantee sonic thrills to partner their hi-def excitement. If you don't have these in your collection, you're missing out...

23 Blu-ray soundmixes *that'll blow your socks off!*



Sicario

Not the most bombastic of tracks, but a beauty nevertheless. This moody, naturalistic crime thriller benefits from a moody, naturalistic Dolby Atmos mix that meshes perfectly with Roger Deakins' gorgeous cinematography. Star of the show is the unusual score – an almost tuneless, throbbing slice of synthetic music that oozes from the surround channels with sinister presence. An underground gun-fight is perhaps the obvious highlight when it comes to steering and effects placement, but it's the whole mix that impresses here.

Evil Dead [2013]

Fede Alvarez's gore-strewn remake of Sam Raimi's cult horror classic ups the production values, particularly when it comes to sound design. At times, this DTS-HD 5.1 track proves the sonic equivalent of putting your head into a meat-grinder as flesh is ripped and torn with stomach-churning fidelity. Elsewhere, it reins in the visceral mayhem to showcase a dab hand at evoking spooky ambience and raising goosebumps. Check it out.



Godzilla

The titular star of this worthwhile Kaiju reboot obviously doesn't speak, so much falls upon sound designer Erik Aadahl to breathe life into the stomping beast through aural cues. It goes without saying that your subwoofer gets a thorough workout – more remarkable are the inspired, organic-sounding clicks and wails that positively fill the room (even in DTS-HD 7.1 form – the film was released theatrically in Dolby Atmos). It's literally an awesome effort, and more subtle and inventive than you might expect.

Everest

It's testament to the impact of Everest's BD audio (either in Atmos or TrueHD 7.1) that watching this disaster epic will leave you shivering, terrified and checking for snow-drifts in the corner of your movie den. This is a tense, nail-biting film and much of that is down to the tapestry of icy-winds, crunching snow and weighty avalanches that make up large swathes of the soundmix. There's copious attention to detail in place of a throw-it-all-together approach. A cool, calculated classic.



Star Wars: The Force Awakens

Stuart Wilson's Academy- and BAFTA-nominated soundmixing and John Williams' genre-defining score are delivered to your home in rousing DTS-HD Master Audio 7.1. The balance between surround effects placement, rich dialogue channel and overall sense of immense scale make this a must-have demo disc. But which chapter to choose? Well, the triumphant return of the Millennium Falcon is as good as any – when TIE fighters screech through the soundfield and the Falcon lumbers into action, totals a building and then hugs the sand dunes, it's like all your AV Christmases have come at once. Shame that the Atmos track is still stuck in a galaxy far, far away.





San Andreas

It's easy to disparage the Atmos audio of this muscular earthquake thriller as simply the product of someone sitting in the mixing suite and pushing every dial up to 11. Yes, this favours sofa-churning impacts rather than subtlety, and can at times leave you feeling overwhelmed, but that's surely the point considering the city-destroying, tsunami-forming action. LFE is used with abandon, buildings crumble around you – and seemingly on top of you – and glass shatters with snappy detail. It's a go-to platter when you need something that'll set pulses racing and irritate the neighbours.

Spartacus: Restored Edition

Retooled mixes for vintage films often get a bad rap, but this welcome HD re-issue of Stanley Kubrick's historical drama draws on the six-channel audio track that accompanied the original 70mm cinema release as the basis for brand-new DTS-HD MA 7.1 sonics. The result is extraordinary, giving the film an authentic sense of scale through a surprisingly wide front-end, copious use of the surround and rear channels and no shortage of LFE. Epic.



Inside Out

Pixar's most creative film in years also has a delightfully playful and nuanced 7.1-channel DTS-HD track, which runs the gamut from subtle ambience to full-on cartoonish mayhem. It's a movie with frequently massive locations, and these are brilliantly conveyed by voices and footsteps that echo into the distance, plus all manner of crisp and inventive Foley effects. For a showstopper, it would be remiss not to make special mention of the 'Abstract Thought' sequence, where madcap sonics double-down on the hallucinatory visuals.

Creed

This Rocky spin-off following the exploits of Apollo Creed's son (complete with chest-swelling bursts of the original score) punches well above its weight with a pugilistic DTS-HD Master Audio 7.1 track on both BD and 4K BD versions. As expected, the boxing sequences feature each landed blow accompanied by sickening thuds and crunches; at the same time, the roar of the crowd builds around the fighters, while barked ringside instructions pop up from all directions. A bruising experience that impresses in its complexity.



Golden oldies

And don't forget these Blu-ray stalwarts

King Kong



Peter Jackson's 2005 remake makes do with a 5.1 mix (DTS-HD MA) but doesn't leave you feeling shortchanged. It's a track that captures the tremendous scale of the onscreen action through deep and boisterous LFE and head-spinning channel changes. For years the Kong v V-Rex sequence was routine demo fodder, and its power hasn't diminished.

Hellboy 2: The Golden Army

This fun sequel hit Blu-ray in 2008 armed with an oh-so-aggressive DTS-HD MA 7.1 track. Surround speakers and subwoofer are in near constant employment, and the dynamic range is outstanding. Whack on the Golden Army showdown for a good old-fashioned multichannel pummeling.

Flight of The Phoenix

Not the original (see p9) but the 2004 retread, where the sound team seemingly spent most of their time working on the outrageous plane crash sequence. Listen closely to the DTS-HD MA 5.1 track and – amidst wind, sand, propellers and wrenching metal – you can probably hear the kitchen sink.

The Book of Eli

Sound is a vital part of this Denzel Washington post-apocalyptic caper, for reasons that we won't bother you with. All that needs to be said is that the 2010 Blu-ray's DTS-HD MA 5.1 audio is a thing of beauty, from its scene-setting ambience to moments of point-of-view-changing invention.

Guardians of the Galaxy

Marvel's spectacular space-faring adventure provides a constant stream of sonic thrills on Blu-ray, with a true 360-degree soundscape (DTS-HD MA 7.1) bursting at the seams. Highlights are numerous, but you can't go wrong with the gang blasting their way out of the Klyn prison (pictured), the dizzying pod chase around Knowhere or the explosive final assault on Xandar. The film doesn't take itself too seriously, and neither does the soundmix. To sum up in one word? Fun.



Mad Max: Fury Road

There's a reason that this BD is a frequent presence at AV shows, and it's the Atmos soundtrack. At times there's not much in the mix beyond the driving score and roaring engines, yet the latter are imbued with a real sense of power, shifting around and through the soundfield with menace. A sandstorm sequence, meanwhile, sees height and width used to exemplary effect, as bodies and cars are tossed around by the sand-soaked wind. When it comes to audio, this is full-throttle.



Transformers: Age of Extinction

Dolby Atmos arrived in home cinemas on the back of this metallic LFE extravaganza. It was a smart choice for a debut, as so much of the action here takes place up in the skies, making vertical and overhead steering a common theme. There's simply tons of detail here, too, with multiple effects fizzing and cracking into each other, while the bass track slams, groans and rolls from every corner.

Gravity: SE

No disc collection is complete without this atmospheric space drama, where innovative visuals are matched by Glenn Freemantle's award-winning, precise sound design. Arguably the first Atmos track that really explored the scope of the format, this treats the hemispherical soundfield as its own personal sandpit, playing with swirling effects, dramatic level changes and unnerving moments of near silence – Freemantle is aware that sometimes less is more... – that hammer home the extra-terrestrial setting.



Interstellar

There's something mesmeric about the soundmix of *Interstellar*. This 5.1 DTS-HD MA track blends cosmic-scale drama – the disastrous diversion to the water planet is an exquisite piece of sound design – with meticulous quietude. Does it actually mix dialogue so low you can't hear what's being said? Not to our ears. Sure, it often has to compete with other elements, but the spatial imaging of the soundfield provides undeniable clarity. And what do we find when we venture through the wormhole? A universe of deep, throbbing bass...

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Jurassic World

In 1993, *Jurassic Park* turned heads courtesy of its revolutionary DTS mix – this 2015 sequel shares the same DNA. Obviously the sound signatures of the dinos are the major draw, from the thunderous footfalls of the Indominus Rex to the roar of the Mosasaurus, but this DTS-HD MA 7.1 soundfield is equally adept at realising locations. Jungles teem with insect and bird noise; park-goers call out from offscreen. The score, too, is blockbuster gold, showcasing dynamic blasts and gentle lulls, and digging out the original themes to raise a smile.

How to Train Your Dragon 2

It may have ditched the best of the extra features on its trip across the Atlantic, but the UK Blu-ray for the animated sequel retains the film's reference-grade DTS-HD MA 7.1 soundtrack. There's a rousing orchestral/choral score that wouldn't seem out of place in a live-action fantasy, slick integration of the front and rear channels, and a whirlwind of surround activity – particularly whenever Toothless and Hiccup take to the skies.



Captain America: Civil War

After the curiously anaemic mix that accompanied *Avengers: Age of Ultron*, Disney owed it to die-hard AV enthusiasts to do a better job with CA3. And it did. This hits all the right notes for a night on the popcorn – an expansive soundfield, rich, deep bass effects, zig-zagging audio pans and fulsome dialogue. It's a soundmix worthy of one of cinema's finest big-budget blockbusters. Now keep it up!

Bram Stoker's Dracula

Francis Ford Coppola's 1992 adaptation of the classic Gothic novel was always a feast for the eyes and the ears, but last year's remastered (Region A-locked) US Blu-ray takes it to another level with a fantastic Dolby Atmos soundmix. Shockingly spacious and making frighteningly effective use of the additional height dimension, it's equally adept at handling delicate atmospheric effects as it is more dynamic cues.



Batman v Superman: Dawn of Justice

If you're looking for super-heroic sound, then Zack Snyder's latest puts on a show. Through an Atmos decoder it provides engulfing, exuberant action, but the impact remains in 7.1, too. The opening, which brings Metropolis crashing down, provides ample scope for seismic LFE and dramatic audio – you'll fear for the structural integrity of your Fortress of Solitude. The soundtrack also makes a tasty meal of Hans Zimmer's portentous score. This is reference-quality bedlam.

John Wick

Another poster boy for the Atmos revolution, with a soundmix that works tirelessly to put you right next to Keanu Reeves' reluctant hitman as he goes about his business. There's perhaps more gunshots than lines of dialogue here, and the steering and placement of *John Wick's* ballistic bluster is remarkable. It needs to be, too, as directors Chad Stahelski/David Leitch throw their cameras around with frenetic relish. When it comes to demos, the nightclub shootout is a perennial fave, as the soundmix works effortlessly to track the onscreen action amidst the changing ambience as Wick stalks from room to room. Brutally effective.



The Fifth Element

Luc Besson's insane SF romp featured stunning sound on its DVD release 18 years ago, but it came of age with the 2015 Atmos remastered Blu-ray (Region A US import). This supreme slice of aural engineering rips the original sound right back to basics and remaps it with stonking dynamics and effects precision. The entire first chapter is a rollercoaster of eye-assaulting colour matched with thrilling sound, underpinned by an infectious Latin soundtrack.



Zero Dark Thirty

Some movie soundmixes dazzle without ever really throwing their weight around or over-egging the AV pudding – this 5.1 DTS-HD MA outing is one such example. A blend of wonderful fidelity, crisp dialogue, accurate soundstaging, bursts of gunfire, moments of real LFE weight and quietly atmospheric sequences, it's a consistently involving (and evolving) experience that goes hand-in-glove with Kathryn Bigelow's gripping and controversial depiction of the hunt for Osama Bin Laden by US intelligence agencies.

Edge of Tomorrow

The time-repeating narrative of this blackly comic sci-fi focuses chunks of the action on a show-stopping grunts-vs-Mimics sequence, which re-imagines the Omaha beach landings as a turbo-charged futuristic battle. The whip-smart surround activity here (in 7.1 DTS-HD MA) is astonishing in its complexity and steering, while LFE thuds and rumbles add an extra dimension to the chaos. By the end you'll be as awestruck as Tom Cruise's naive interloper ■



What you say

We asked on social media for your no.1 soundmixes...

Richard Gaunt: The pre-credits sequence of *Mad Max: Fury Road* is fantastic. For entire film mixes, although neither are great films, *Oblivion* and *Terminator Genisys* are stunning soundtracks.



Jeff Baker: Even though the film is a bit weak, you can't beat the 'human claymore' opening sequence of *Swordfish* for sheer dynamics. Breathtaking on a good system.

Steve Old: For realism I would have to say *The Green Mile*. It is very atmospheric when it needs to be. It may not be the most dynamic mix around, I know, but very effective. And it certainly gives the subbie a good work out!

Paul Stack: *Saving Private Ryan!*

Mike Wadkins: My show-off used to be the bike chase in *M:I 2* as there is a point where the bike spins through all the channels. Overall? That's a hard question. The best way to show off a height/Atmos setup is *The Shadow*. The bridge opening is amazing and uses every channel.

But one mix? Perfect from beginning to end? Maybe *The Book of Eli*.

The original cinema mixes of *T2* and *Jurassic Park* were amazing but ruined through remixes and near-field rubbish.

Have we missed your favourite Blu-ray movie soundmix? Let us know: email letters@homecinemachoice.com



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Height of perfection

With in-ceiling speakers, 11-channel processing and smart design, this cinema room rises to the Dolby Atmos challenge



WOW – HERE'S a dedicated theatre room that we'd find hard to leave. Completed by Leeds-based installer Bespoke Home Cinemas, it partners a 7.2.4 speaker system with separate processing and power amplification and Ultra HD projection. Meanwhile, the stunning design and customised lighting add that extra sparkle.

The six-week project was handled entirely by Bespoke from pre-planning to system calibration. The room was originally a basement space (previously used as a gym) with a whopping four-metre ceiling height. Getting this to work with the eventual Atmos surround system required lowering it by a whole metre, using a suspended frame with natty coffer detailing, and packing it with acoustic Rockwool to decouple it from the rooms above. The size of the basement space (70m²) also enabled an area to be portioned off for a separate bar/games den, and additional room to house the AV kit rack ■

KIT CHECKLIST

ARTCOUSTIC: 2 x Spitfire Control3 subwoofers (triple 10in woofers); 2 x 750W subwoofer power amps; 3 x SL Spitfire 16-8 LCR speakers; 4 x SL 4-2 rear/surround speakers; 4 x Architect 4.2 in-ceiling Atmos speakers

MARANTZ: AV8802A 11-channel processor; MM8077 seven-channel power amp; MM7055 four-channel power amp

ARCAM: BDP411 Blu-ray player

SONY: VPL-VW520ES Ultra HD/HDR projector

SCREEN EXCELLENCE: 3.8m fixed screen (2.35:1 aspect ratio) with 4K/acoustic fabric

FUTURE AUTOMATION: PM1 projector bracket

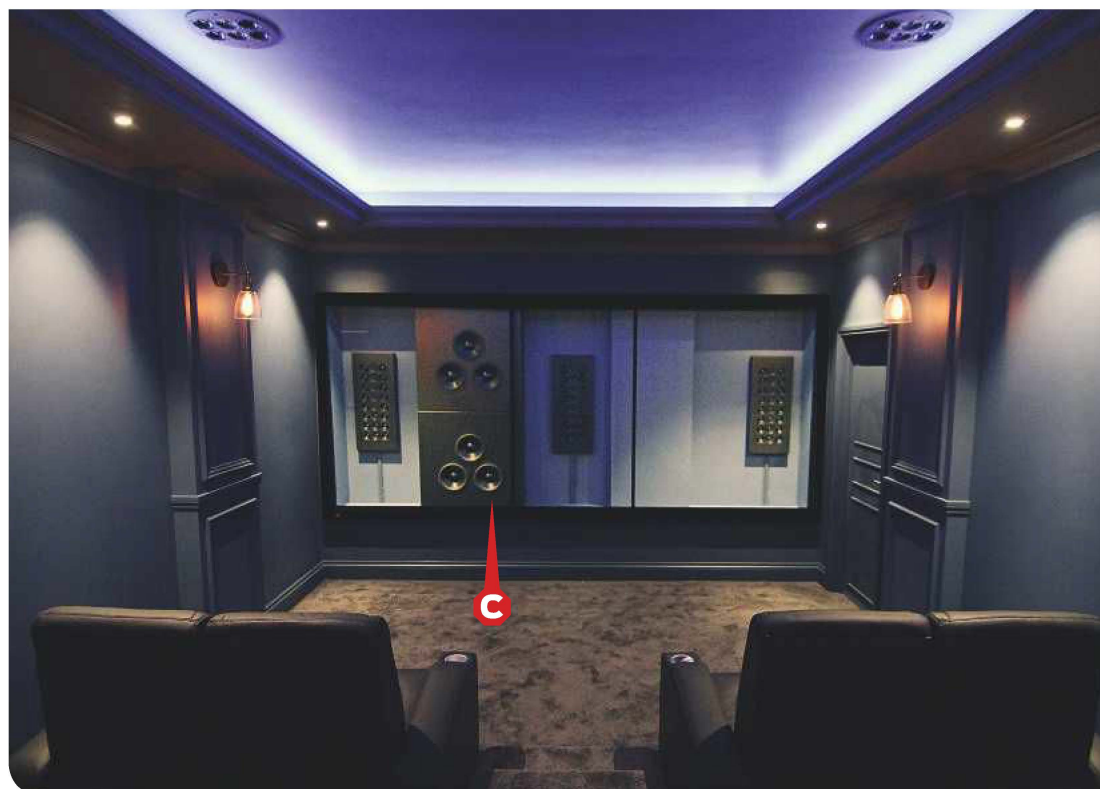
CONTROL4: HC800 home automation processor; SR260 remote control

MICROSOFT: Xbox One gaming console

SIGNATURE: Modular cinema seating



The room lighting – eventually integrated into the Control4 system – goes in



A. 4K ready!

The Sony VPL-VW520ES projector supports 4K and HDR content, meaning the system can accommodate a UHD BD deck – and a Sky Q PVR has already been added

B. Pieces of eight

Single and dual recliners from seating specialist Signature are arranged over two rows, with the rear quartet raised on a carpeted plinth

C. Wall of sound

Working away behind the screen are a trio of Artcoustic's SL Spitfire 16-8 speakers (for the L/C/R channels) and two triple-driver passive subwoofers

D. Cued up

The cinema owners can enjoy a quick game of pool and a drink in the adjacent bar before settling down for a movie. Maybe Paul Newman in *The Hustler*...

E. Game on

...or they can fire up this Xbox One console and play *Forza Horizon 3* on the room's 3.8m projector screen

F. Marantz trio

Taking care of surround processing (including Dolby Atmos and DTS:X) is a Marantz AV8802A processor. Below it in the rack are seven-channel and four-channel Marantz power amplifiers



Building the partition wall





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HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

All prices quoted are approximate and may have changed



Danny Phillips plays a game of spot the subwoofer with this unusual home AV speaker system

Definitely interesting

Dolby Atmos and DTS:X speaker systems are the latest home cinema Holy Grail, but installing them can be an invasive business. The extra speakers and cables involved is enough to give clutter-haters a panic attack. In fact, many people break into a cold sweat just considering regular 5.1.

US brand Definitive Technology (DefTech to its friends) is here to make the process a bit easier. With the BP9000 series, it's devised a speaker system with integrated active subwoofers and upfiring Atmos modules that delivers a 3D listening experience from fewer boxes. It has obvious instant attraction.

An evolution of DefTech's BP10 speakers launched in 1990, the fourth-generation BP9000 range uses bipolar technology to, we're told, 'closely approximate how sound is generated in a natural environment.' DefTech calls it a Forward Focused Bipolar Array, using front- and rear-firing drivers in its floorstanders to offer a big, spacious soundstage with no particular sweet spot.

The system on test here includes a pair of BP9040 towers (£950 each) and the CS9060 centre speaker (£750), all of which feature an integrated 8in powered subwoofer. On surround duties is a pair of SR9040 bipolar speakers (£400 each), while Dolby Atmos/DTS:X height effects are delivered by DefTech's A90 modules (£550 per pair).

This is a midrange package, but if you want to go large there are two floorstanders with bigger subwoofers (BP9080 and BP9060); the CS9080 centre, which adds a passive bass radiator; and the step-up SR9080 surrounds.

Modern and minimal

In terms of design, this system has luxury coursing through its veins. The BP9040 floorstander is a particularly astonishing proposition – its aircraft-grade aluminium construction offers remarkable heft and solidity, and the styling veers away from more traditional wood-finished cabinets favoured by UK brands. Rather, the speaker is modern and minimal, covered from head to toe in a whole-body black cloth wrap. Beneath this are chamfered edges to minimise diffraction – even the cloth wrap claims a performance benefit by removing a tricky grille edge that could disrupt soundwaves. The slim cabinet (152mm wide) sits on a sturdy aluminium base with supplied screw-on feet or spikes.

A slight drawback to the design is that you can't see what the driver array is doing. This includes two

1in aluminium dome tweeters and three 4.5in mineral-filled polymer cone midrange drivers. As part of that Forward Focused Bipolar Array ethos, two of the mids and one tweeter fire forwards while the other drivers aim backwards towards your screen wall.

These drivers are mounted in separate enclosures within the main chassis to protect them from the movement of the side-facing 8in powered subwoofer that lurks below. The onboard amp is a 300W Class D affair with what DefTech refers to as 'Intelligent Bass Control' (a 56-bit DSP). Subwoofer level can be tweaked using a dial on the back, where you'll also find an LFE input.

The CS9060 centre channel shares the BP9040's design traits and features, including >

AV INFO

PRODUCT: Floorstanding speaker array with integrated subs/Atmos speakers

POSITION: Entry-level when it comes to DefTech's BP9000 series

PEERS: XTZ Cinema Series; Pioneer S Series



1. Here the A90 Atmos modules are in place on the BP9040 towers

2. The SR9040s arrived too late for our photoshoot!

a 150W DSP amp. It uses two 4.5in midrange drivers, a 1in tweeter and an 8in active woofer. It's quite a large affair (in terms of depth), so you'll need to consider how you'll accommodate it.

The compact SR9040 surrounds are the black sheep of the family, sporting a less sexy piano black finish. Matching 1in tweeters and 3.5in midrange drivers disperse in a L/R bipolar pattern for THX-style home cinema immersion.

Completing the set are the Dolby Atmos-certified A90 height speakers. These use the same 1in tweeter and 4.5in midrange driver as the towers, set into a sloped baffle. Again, they're concealed behind a black cloth grille.

Using add-on speaker modules for Dolby Atmos/DTS:X is nothing new but I adore the way they've been implemented here. They plug directly into a hidden terminal on top of the BP9040 floorstander, concealed beneath

'The A90s and SR9040 surrounds generate an expansive soundstage packed with atmosphere'

a removable aluminium plate (meaning the BP9040s look perfectly normal without them). Once connected they form a seamless, cable-free union with the speaker below, with speaker wire running direct from your AVR into the binding posts at the bottom of floorstanders.

Touches like this make the system a fairly easy install, but because the floorstanders require their own mains power a major plug socket reshuffle might be in order. And note that the A90s can't be used independently with other system speakers.

Leaving Dust for dust

Once installed and rigged up to a 7.2-channel Denon receiver, I set the DefTech array to work with some choice cuts. The *DTS 2016 Demo Disc (Volume 20)* was my first port of call, and the crowd-funded sci-fi short *Dust* provided a showcase for the A90s' height-channel talents. As the alien creature crawls around the underground cavern, snarling, gurgling noises and high-frequency rustling move fluidly around the space. The sense of immersion, elevation and wraparound movement is stunning.

When the creature jumps up into the rafters, those sounds move clearly and purposefully upwards as the A90s shoot at the ceiling. The scene ends with our hero Irezumi throwing an iridescent blue substance at the creature that makes it shatter – the sound of tinkling glass floats across the soundstage with airiness and detail.

Next I dug up *Crimson Peak* (Blu-ray) and immersed myself in its fabulous DTS:X soundtrack. If anyone you know is unconvinced by the benefits of height speakers, play this disc and watch their reaction.

Here the A90s and SR9040 surrounds generate an expansive soundstage packed with atmosphere and brooding tension. From the moment Edith sets foot inside Allerdale Hall, the system ups the ante.



3

The building's high ceilings and wide open spaces provide the ideal playground for the system to work its magic, peppering the soundfield with half-heard whispers, creaky staircases and fluttering insects. They come from above, behind and beside you, each sound rendered with sweet clarity. The soundstage is layered and expansive – you really get a feel for the scale and height of the house.

But it isn't just height info that makes the system's performance exciting. The floorstanders and CS9060 centre snap forcefully whenever a ghost suddenly appears, the impact heightened by impressive slam from the integrated subwoofers – although I'll confess the centre channel woofer went unused in this audition, as I stuck to the twin LFE outputs of my receiver for the L/R speakers. Bass never feels in short supply despite there not being an obvious LFE beast lurking in the corner of the room.

Back to front

What's more, the BP9040's bipolar driver implementation does seem to prove worth



4

all that R&D effort. There's a sense of envelopment from the front LCR soundstage, almost a borderless soundfield. Likewise, the SR9040 surround speakers create a wide sonic image that spreads across the whole rear. As effects move, their path is unbroken.

A good example is when Edith runs a bath during Chapter 8 of *Crimson Peak* – the groaning and clanking of the pipes runs across the back channels with impressive fluidity. Later, she throws a ball for the dog, and as it bounces out of frame the tapping and scratching glides from front to back without a blind spot or tonal shift.

Crimson Peak also reveals the DefTechs' nifty detail retrieval. Tiny noises emanate from every speaker with tangible texture and sound three-dimensional.

Crank up the action and this system doesn't seem phased. I lit the Blu touch paper on *Mission Impossible: Rogue Nation* and it delivered the Dolby Atmos track with explosive results.

The scene showing Tom Cruise's espionage expert boarding a plane as it takes off is a delight. The combined low-frequency force of the dual subwoofers makes the plane rumble with frightening depth and power, melding with a midrange roar from the other speakers. It's jaw-droppingly good. Yet all the while the speakers never lose track of dialogue or the score's iconic melody.

Quieter expository passages reveal life-like, full-bodied dialogue, thanks to the CS9060's rich and detailed midrange. Alec Baldwin's voice has a lovely velvety husk, plus it picks out the small inflections and sibilance that can go missing through less scrupulous speakers.

If you still need convincing, I'd recommend listening to music through the BP9040s in stereo. Naturally, the built-in subwoofers bring an embarrassment of riches in the low-end department, lavishing everything with a tight and well-defined bottom-end. The sheer force with which it hits kick drums and sine-wave basslines in dance tracks is astonishing. Bass doesn't boom or flap wildly – it's tight and accurate, helping establish an unwavering sense of rhythm.

This musicality continues into the refined high frequencies. High-hats and percussion don't just sound airy, they positively float. The array picks out details that I didn't know were there. A sumptuous midrange makes saxophones and electric keyboards in Future Prospect's jazz album *The Climb* sound warm and well-rounded.

I'll admit I was wary as to the impact the Forward Focused Bipolar Array system would have on two-channel listening, fearful of all that reflected sound in the room. However, it doesn't have a detrimental effect on the placement or directionality of instruments. Music feels like it's being played live thanks to the spacious, natural presentation and insightful detail. There's no particular sweet spot either – the bipolar drivers maintained a consistent balance through the frequencies as I moved to different spots on my sofa.

Living with LFE

Negatives are few and far between, but there are some. Bass junkies might not agree, but the inclusion of subwoofers in both floorstanders did feel like overkill at times. The amount of bass is astonishing but often threatens to overpower the other drivers. I spent quite a while tweaking volume knobs to find the right balance, the sort of faffing about you might not have to endure with an external sub.

SPECIFICATIONS

BP9040

DRIVE UNITS: 2 x 1in aluminium dome tweeters; 3 x 4.5in mineral-filled polymer cone midrange drivers; 1 x 8in powered woofer (with 300W Class D amplifier); 2 x 8in bass radiators **ENCLOSURE:** Bass reflex **FREQUENCY RESPONSE (CLAIMED):** 22Hz-40kHz **SENSITIVITY:** 92dB **POWER HANDLING:** 50-300W **DIMENSIONS:** 152(w) x 990(h) x 330(d)mm **WEIGHT:** 16.3kg

CS9060

DRIVE UNITS: 1 x 1in aluminium dome tweeter; 2 x 4.5in midrange drivers; 1 x 8in powered woofer (with 150W Class D amplifier) **ENCLOSURE:** Bass reflex **FREQUENCY RESPONSE (CLAIMED):** 32Hz-40kHz **SENSITIVITY:** 91dB **POWER HANDLING:** 50-300W **DIMENSIONS:** 527(w) x 151(h) x 304(d)mm **WEIGHT:** 11.8kg

SR9040

DRIVE UNITS: 2 x 1in aluminium dome tweeters; 2 x 3.5in midrange drivers **ENCLOSURE:** Bipolar **FREQUENCY RESPONSE (CLAIMED):** 50Hz-40kHz **SENSITIVITY:** 92dB **POWER HANDLING:** 50-150W **DIMENSIONS:** 198(w) x 241(h) x 136(d)mm **WEIGHT:** 4.1kg

A90 (Atmos module)

DRIVE UNITS: 1 x 1in aluminium dome tweeter; 2 x 4.5in midrange drivers **ENCLOSURE:** Two-way Dolby Atmos-enabled upfiring speaker **FREQUENCY RESPONSE (CLAIMED):** 86Hz-40kHz **SENSITIVITY:** 89.5dB **POWER HANDLING:** 50-150W **DIMENSIONS:** 152(w) x 95(h) x 33(d)mm **WEIGHT:** 2.7kg

PARTNER WITH



ANTHEM MRX720: Baby brother to the 11-channel MRX 1120, this seven-channel AV receiver still rocks Anthem's impressively precise ARC room EQ and is Dolby Atmos-capable and DTS:X-ready. Available for around £2,900.

Another obvious issue is that you have no control over subwoofer placement – they have to stay wherever you put the floorstanders. If your go-to place is in an area of the room with less-than-ideal low-end acoustics you'll just have to deal with it, and having dual woofers is more likely to create standing wave issues.

And if I'm being picky, the system could perhaps be a touch more forward-sounding. Tonally, these play things safe, which is great for listening for long periods without fatigue but doesn't make it quite as exciting or spicy as the likes of XTZ's upfiring Cinema Series [see HCC #259], for example.

However, such complaints are like moaning that your football team only won 6-0. I'd rather focus on this system's myriad positives, like its immersive, three-dimensional soundstage, visceral bass and scintillating detail, not to mention the convenience of integrated woofers and those cleverly connected Atmos modules. It's a fabulous speaker array that cuts clutter without compromising performance – a combination too compelling to ignore ■

3. The BP9040 also features binding posts for the Atmos heights and an LFE input

4. The A90 speakers employ an angled two-way driver array

HCC VERDICT



Definitive Technology BP9000 5.2.2

→ £4,000 → www.definitivetech.com

WE SAY: Not the most common of multichannel speaker systems, but the performance here assuages any concerns that form factor and design have taken precedence. A stylish thriller.

AV INFO

PRODUCT:

49in edge-lit 4K TV with HDR playback and Tizen smarts

POSITION:

Highest specified flat TV series in Samsung's 2016 line

PEERS:

Samsung UE55KS7000; Philips 55PUS7101; Panasonic 58DX700

Samsung's best flat TV range for 2016 is just the ticket for curve haters everywhere, reckons **John Archer**

Going flat-out for 4K HDR

Samsung just loves curved TVs. Some consumers seem to like them, too. And, actually, even us grumpy, cynical folk at *HCC* have said nice things about them from time to time – though usually only when discussing TVs considerably bigger than the 49-inch UE49KS8000.

And there are certainly plenty of people out there – including many pretty serious AV fans – for whom curved screen TVs are anathema. If you fall into this camp, or you have issues like bright lights opposite the screen or wide viewing angles that curved screens tend to exacerbate, then Samsung's highest-specified flat TV range, the KS8000 series, could be just what you need.

The KS8000 series is essentially a flat version of Samsung's KS9000 lineup, which represents the second-best specified range of TVs from Samsung this year, behind the flagship KS9500 models. This means that rather than the direct LED lighting system of the KS9500s, this TV uses an edge LED lighting system to pump out HDR-friendly levels of brightness. This is aided by a local dimming system that enables different segments of the edge lighting to output different levels of brightness to suit the content you're watching.

The UE49KS8000 matches the illustrious KS9500 series, however, in using Quantum Dot technology to deliver its colours, enabling a colour range comfortably higher than the 90 per cent of the Digital Cinema Initiative palette defined by the Ultra HD Alliance's 'Ultra HD Premium' specification.

In fact, the UE49KS8000 hits all Ultra HD Premium specification requirements for a strong HDR performance, including delivering 10-bit colour depth, peak brightness levels of beyond 1,000 nits, a black level of below 0.05 nits, and a native 4K/UHD resolution.

Add to all this Samsung's improved Tizen-based smart TV platform, which now introduces a second row of contextual icons to speed up navigation, and the UE49KS8000 has already done much to justify its £1,300 price.

Understated elegance

The TV looks the part. The narrow frame, slender rear, premium build quality and metallic trim create a more understated and elegant approach than the relatively

brash, angular look Samsung favoured last year. Although the stand is still a bit in-yer-face.

The UE49KS8000 is well connected, sporting highlights of four HDMI's, three USB inputs and the now *de rigueur* Wi-Fi and hard-wired network options. You can use these to either access multimedia on DLNA devices on your network, or Samsung's own selection of content apps, including UHD and HDR-compatible versions of Netflix and Amazon, plus the BBC iPlayer and ITV Hub. You currently still don't get the All4 or My5 catch-up services. I'd suggest that – at this rate – you never will.

The screen size has to be considered. 49in is by no means small, but potential buyers should certainly measure up and consider whether they can budget more for its 55in stablemate if they want to reap 4K rewards.

Dropping the UE49KS8000 in at the deep end with *X-Men: Apocalypse* on Ultra HD Blu-ray soon reveals it to be yet another well-judged Samsung TV.

Particularly alluring is its brightness. The peak whites, gleaming skin/metal reflections, sun-drenched skies and ultra-dynamic, tonally rich colours that are HDR's trademark are delivered with an intensity and authority that no other TV in the same price bracket can match.

The bright yellows of the flames as Quicksilver rescues students from Xavier's exploding mansion, for instance, look fearsomely intense, as do the lurid skies of some shots in Egypt near the film's beginning.

The scene in Caliban's underground 'bar', where *Apocalypse* meets Psylocke for the first time, enjoys a startlingly high level of contrast for an LCD TV. And the dynamism evident in scenes such as this isn't just a function of the UE49KS8000's exceptional brightness; it also owes a debt to an impressive black level performance by LCD TV standards, created by a combination of Samsung's VA-type panel design and its local dimming engine.

The TV's high-contrast duo of deep black colours and high brightness contributes to a superb colour

1. As usual, twin zappers are supplied

2. Apart from the lack of a curve, the screen's design apes the KS9000 series





**JUNIOR
JAPES**

The kids are
alright in *X-Men:
Apocalypse* on
Blu-ray p96



3

performance. It copes with the exceptionally rich, expanded colour palette on show during the final showdown of *X-Men: Apocalypse*, as all those colourful super-powers and mutant bodies start flying around. Saturations are rich, colour 'volumes' look exceptionally high, and there's some outstanding tonal subtlety to back up the raw punch.

4K detail is in evidence too. The sense of sharpness and clarity here is greater than on most similarly-priced rivals. The only time this breaks down is when there's an extended camera pan, such as the camera spinning

'The Samsung's sharpness and clarity brings out 4K details better than most similarly-priced rivals'

around Eddie and his coach in the UHD BD of *Eddie The Eagle*. Shots like this can look startlingly juddery without the motion processing in play, yet the motion processing looks a little artificial and heavy-handed if you use it.

There is one other actually more pressing (and perhaps expected) problem with the UE49KS8000's HDR pictures, which is that while the local dimming delivers an extreme contrast range, it can also cause bars of light to run the full height of the picture around bright objects that appear against dark backdrops. Examples of this happening are around the background lamps in Caliban's joint, and some shots in the sequence where Xavier enters Jean Grey's room at night.

These bars can be really quite irritating. Yet the only way to remove them is to turn off the local dimming system, which immediately has a heavy negative impact on the image's contrast. On the upside, this light striping issue is actually less aggressively pronounced than it is with most rival HDR TVs that use edge-based illumination.

The striping becomes much less pronounced, too, when you switch to the standard dynamic range Blu-ray of *X-Men: Apocalypse*. This is simply because SDR requires much less brightness than the HDR UHD BD image. Samsung's panel doesn't have to work as hard to manage

SPECIFICATIONS

3D: No **4K:** Yes. 3,840 x 2,160 **HDR:** Yes. HDR 10 **TUNER:** Yes. Freeview HD and Freesat HD **CONNECTIONS:** 4 x HDMI inputs; 3 x USB; Ethernet port; RF port; digital optical audio output; RS232 **SOUND:** 60W **BRIGHTNESS (CLAIMED):** Peaks of more than 1,000 nits **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,094(w) x 635.8(h) x 42.5(d)mm **WEIGHT:** 16.6kg

FEATURES: Built-in Wi-Fi; USB multimedia playback; HDR+ HDR 'upscaling' engine; Tizen-based smart TV system with Netflix and Amazon 4K/HDR; Game mode that also works with HDR; media file streaming from DLNA devices; SUHD panel; edge-LED illumination; HDMI 2.0a/ HDCP 2.2

PARTNER WITH



SAMSUNG UBD-K8500:

Launched at £430 but now available for as little as £280 if you shop around, Samsung's deck isn't the most impressive 4K option, but will nevertheless give this display UHD HDR content to chow down on.

its light. In fact, the UE49KS8000 is a quite beautiful SDR performer, delivering pictures rich in contrast, colour and detail, and so free of distracting problems that they mostly reach benchmark level for the sub-£1,500 price point.

The tech-curious can convert SDR content to something approximating HDR using Samsung's new-fangled HDR+ processing system. Whether or not you do this is, of course, down to personal choice. Activate it to make sure you're always getting the maximum impact from Samsung's super-bright, super-colourful TV, but beware of its limitations. I personally found I enjoyed more balanced, immersive results by keeping the set in SDR mode when viewing traditional sources.

Samsung backs up the TV's picture charms with surprisingly robust audio that can fill pretty large spaces without becoming shrill or thin. The soundstage delivers plenty of the subtle spatial details that consistently enliven *X-Men: Apocalypse*'s audio mix, while voices sound clear and credible. There's a lack of bass to underpin the film's more destruction-filled moments, though.

HDR collision course

The backlight striping issue is just problematic enough to prevent me giving the UE49KS8000 an unbridled recommendation. True, the head-on collision between HDR refinement and edge-lit panels is an issue not just affecting Samsung TVs, but it's nevertheless a concern that can't be overlooked.

On the other hand, screens that are more accomplished in this regard (including the KS9500 series and LG's OLEDs) are also much more expensive. When it comes to TVs likely to be on many people's audition lists, the UE49KS8000 is a stand-out performer. It's another talented set from a brand that is exhibiting a canny knack of balancing design, features and high-impact visuals ■

3. The TV supports HDR 10 video, and offers HDR+ upscaling

HCC VERDICT



Samsung UE49KS8000

→ £1,300 → www.samsung.co.uk

WE SAY: The UE49KS8000 delivers levels of brightness, colour vibrancy and contrast that leave rivals trailing – but this can lead to some noticeable backlight banding with HDR content.

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Gold 200 - Trusted Reviews February 2016



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MONITOR AUDIO

This slender receiver continues to benefit from relentless refinement, says **Steve May**

Space-saver super sonic





AV receivers are a mature technology, and eking improvement, especially out of an established design, is a daunting task. But just as superstar engineer Adrian Newey can edge a Formula 1 car up the grid through miniscule incremental tinkering, AVRs seem to get slightly better the more you polish them.

Case in point is the Marantz NR1607. The latest iteration of Marantz's long-established slim-line model, it combines a rich vein of feature functionality (Dolby Atmos and DTS:X decoding, the latest HDMI input spec, hi-res audio playback), with decent sonic chops, in a form factor that won't crowd out your equipment rack... or break the bank.

Choose your channels

The receiver is an upper-budget seven-channel design. This means you can opt for either a 5.1.2 Atmos configuration, or nix the heights completely and go for a 7.1 surround flatbed. There's a 7 x 50W (into 8 Ohm) power plant down below, which isn't enormous in the scheme of things, but remains potent enough for the average living room. If you need them, there are also pre-outs for the main stereo pair.

Wi-Fi is integrated (fold-down antennas attached) and supplemented with Bluetooth. Internet radio is on tap, and you can network audio via AirPlay or Spotify Connect, the latter allowing you to hop playback over to the receiver directly from a smartphone. Beyond that, there's not much content frippery; still, the provision of additional services is fast becoming irrelevant, as other better specified devices such as Chromecast or Amazon Echo Dot open up wider support.

For source connection, there are seven rear-side HDMI inputs, all of which support 4K/60p with HDCP 2.2. But there's only one HDMI output here, so feeding both a panel and a projector is a no-go. The receiver will upscale lower-res fare to 2160p, although to be honest I think I'd rather trust my 4K display to handle that job.

On the front panel, you'll find an HDMI input and USB. System control can come via a 12V trigger and IR in/out.

Auto room correction is provided by Audyssey. I was reasonably happy with the calibration offered here. Multiple Audyssey flavours have evolved over time, some more sophisticated than others (MultEQ XT32, MultEQ XT). What we have here is entry-level MultEQ, with optional Dynamic Volume and Dynamic EQ. When setting up MultEQ you have a choice of six monitoring positions, with a minimum of three, which makes it not quite the fastest system to get up and running.

There's also support for a new Audyssey app. Originally seen as a custom install tool, but now aimed at all owners who want to play, it's offered for Android/iOS, priced £20, but hadn't yet launched during this audition.

Previous NR models have offered HDMI passthrough. But whereas before you'd have to turn on the amp just to select a new source (if the last user hadn't been smart enough to second guess what you were going to want), there's enough residual juice to allow you to select a new input while still in standby. Menus are neatly-designed and easy to follow.

Another tweak concerns the receiver's audio delay option, extending the range to a pretty substantial 500ms. High-res audio support now includes DSD (up to

AV INFO

PRODUCT:
Living-room friendly seven-channel AVR

POSITION:
Marantz's new slim-line receiver

PEERS:
Yamaha RX-AS710D;
Pioneer VSX-S520D

1. The NR1607, at 10.5cm high, is easier to accommodate than a traditional AVR

2. The uncluttered handset is backlit



5.6MHz) and AIFF. DLNA 1.5 compatibility ensures access to media on NAS devices. Marantz also maintains that the NR1607 has been retuned, following the introduction of new (although unspecified) components.

Upgrading to 3D audio

If you're a long-term home cinema fanatic, the appeal of Dolby Atmos and 4K functionality might have you hankering to upgrade for the first time in years. But just how big a sacrifice would you make opting for the NR1607 thin-ema, over a vintage volume monster? Well, the good news is rather less than you might think.

Performance is, at times, genuinely bombastic. In 5.1.2 mode, using two Dolby-enabled speakers, the AVR creates a deliciously grin-inducing soundfield. Those classic Dolby Atmos trailers, *Amaze* and *Leaf*, offer a wonderful sense of steerage: in Dolby's tropical forest wings flutter around your head, rain falls from the ceiling, thunder ripples with ferocious intent. It's a crisp, clean and lively performance.

DTS:X is just as entertaining as Atmos (it's not a question of which object-based sound system is best, more that with both you get to enjoy the widest possible choice of creative soundmixing), and while not loaded out-of-the-box, when connected to the internet the NR1607 will prompt you to do a firmware update faster than you can pop corn. A DTS:X mix of Morgan Page's club track *Against The World* dispenses high energy from every channel – there's insistent high-hat and chorus in the heights, pounding synth to the rear and vocals locked dead centre. Music and object -based audio seem perfect dance partners.

Granted, the NR1607 may not have the Swiss clock precision of some dedicated two-channel amplifiers, but then the average stereo sound system can't deliver the kind of multichannel wonderment this AVR offers as standard – a DTS-HD 7.1 mix (with a Neural:X uplift) of *Wizard Staff* by Wampire delights with its complex image placement.

When the Marantz needs to, it can hit hard and fast: 'You know what you get when you mix a thunderstorm with cool moist air at 40,000ft?' asks Vin Diesel in *The Last Witch Hunter*. 'It's simple science.' Cue the entire soundstage shifting backwards as if on tectonic plates.

And when the blue parrots flock in *Rio 2* (another DTS:X demo clip), the soundstage is transformed into a goldfish bowl of squawks and clattery Foley effects.

Naturally there are some things to be wary of. The NR1607 will definitely struggle to drive larger theatres; it just doesn't have the power reserves to fill a cavernous space – and I really don't think every drop of onboard juice is usable. Creep above 80 on the numerical volume gauge and the mid-range becomes Sahara-dry.

SPECIFICATIONS

DOLBY ATMOS: Yes. **DTS:X:** Yes - via firmware update **THX:** No **POWER OUTPUT (CLAIMED):** 7 x 50W (into eight Ohms) **HDMI:** 8 x inputs; 1 x output **AV INPUTS:** 2 x digital audio (1 x optical, 1 x coaxial) **ANALOGUE MULTICHANNEL INPUT:** No **MULTICHANNEL OUTPUT:** No **MULTIROOM:** Yes. Second stereo audio zone **VIDEO UPSCALING:** Yes. To 4K **DIMENSIONS:** 440(w) x 376(d) x 105(h)mm **WEIGHT:** 8.3kg

FEATURES: Built-in Wi-Fi; Ethernet; Bluetooth; USB input; ISFccc video calibration; Audyssey MultEQ room calibration with Dynamic Volume and Dynamic EQ; compatible with incoming Audyssey app; AirPlay; FM tuner; vTuner internet radio; Spotify Connect; DSD playback; FLAC, WAV and AIFF (192kHz/24-bit); ALAC (96kHz/24-bit); 12V trigger; IR in/out; HDCP 2.2/HDR on HDMI

PARTNER WITH



Q ACOUSTICS 2070Si: Add a slim subwoofer to Marantz's on-a-diet AV receiver in the shape of Q Acoustic's vertical-standing bass box that can be slotted in beside your AV shelf. Available for £200, this uses dual 6.5in bass drivers and a 150W amp.

I suspect most users will never need to crank the system that high, though.

Claims that the NR1607 has been retuned largely stand up; this is a supremely confident-sounding AVR, particularly with quality source material, and no way inferior to slim-liners that have come before. The mid-range is way more mellifluous than the mid-range price might suggest. Nor does it sound overly bright or bassy overall.

Agile and tight

A subtle but worthwhile update on a long-serving AVR design. The HDMI functionality is leading edge, and in multichannel mode this Marantz sounds agile and tight with both regular surround and 3D immersive mixes. One shortfall is the provision of a single HDMI, which limits system expansion, and HEOS integration would have been nice. But if neither of these concern you, the NR1607 is undeniably worth an audition ■

HCC VERDICT



Marantz NR1607

→ £600 → www.marantz.co.uk

WE SAY: This space-saving Dolby Atmos/DTS:X AV receiver combines a punchy performance with a great feature specification and classy user interface



3. Why does this AVR offer dual component video inputs? Answers on a postcard...



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Simply does it

Samsung drops some features to get this soundbar system in under the £300 mark.

Danny Phillips puts multiroom on hold and discovers if it can handle Doomsday's roars

AV INFO

PRODUCT:
Soundbar/subwoofer
combi system

POSITION:
Mid-range for
Samsung, below the
3.1-channel K550

PEERS:
Sony HT-RT3;
LG SH5;
Yamaha YAS105

SUCH IS THE ubiquity of multiroom streaming that speaker systems without it tend to stick out like a sore thumb. Samsung's HW-K450 is one such product, a 2.1-channel soundbar package that strips away multiroom and its related trappings to concentrate on boosting TV sound at an affordable price. Nothing wrong with that, of course.

Multiroom may be off the menu, but Samsung has kept other soundbar essentials like a wireless-connected subwoofer, Bluetooth and HDMI ports. It's a no-nonsense system designed to help you escape the woes of weedy telly sonics.

Step up a level to the HW-K550 and there's a slight bump in claimed power, a larger subwoofer and a centre-channel driver. Then the HW-K650 introduces Samsung's multiroom functionality.

This 'bar can connect to some other speakers, though. Samsung's optional SWA-8000S wireless rear kit (£100 approx) allows you to create a 4.1-channel setup. That's

a clever play by Samsung, as it means you aren't forced to choose between stereo or surround sound – you can have the best of both worlds.

Another 'bar on the wall

In terms of style, Samsung suppresses its fetish for all things curved with a straight, rectangular design. At 908mm wide it's probably best-suited to TVs up to 55in and can be wall- or tabletop mounted with supplied brackets and screws.

The HW-K450 feels surprisingly well made for a so-called budget soundbar. The entire body is covered in a black metal grille that tapers alluringly at the edges, with brush effect end-caps. It's not particularly glamorous, but this aesthetic anonymity allows it to blend in with its surroundings.

A large display panel on the front spells out inputs and volume levels, while a cluster of keys at one end provides

handy up-close control. Sockets are hidden within two recesses on the bottom. They include an HDMI input and ARC output (both 1.4), optical digital and 3.5mm analogue audio inputs and a USB port for media playback.

Owners of Samsung TVs don't have to bother with cables at all thanks to TV SoundConnect, which beams sound to the 'bar via Bluetooth.

'Low-frequency moments are joined by a deep rumble from the sub, bringing weight and scale to the performance'

Because the active subwoofer is also wireless, you can install it wherever you can find a mains power connection. Its assortment of textured panels looks nice – dappled, glossy, brushed, cloth – and it's reasonably compact, but overall build quality is disappointing.

As for setup, eschewing network functionality does have its benefits. It's nice to spend some time in the company of a product that doesn't have me staring at blinking status lights like an idiot. Instead, simply connect the cables, turn it on and away you go. If your TV has SoundConnect on board, it should handshake automatically – just hit 'OK' on the onscreen dialogue box. Similarly, the subwoofer pairs without the need to intervene.

The HW-K450's practical, ergonomic remote has a sparse layout and icon-shaped buttons, keeping things streamlined. Sound preset spotters will find six to tick off the list here (Standard, Music, Clear, Sports, Movie and Night) while the Surround Sound Expansion mode attempts to widen the soundstage. Dedicated controls let you tweak the surround, bass, treble and subwoofer volume settings.

Smartphone addicts can use Samsung's Bluetooth Remote App to control the 'bar's basic functions and media playback. It uses the same layout as Samsung's multiroom app, with a jog dial for skipping tracks and handy sidebar menus. It's sophisticated and easy to use but can't be used when the HW-K450 is connected via TV SoundConnect, which hogs the Bluetooth connection; in this case it's only useful for streaming music from your smartphone.

Snappy Samsung

The sound here bears all the hallmarks of a budget soundbar – snappy and forward-sounding, primed for maximum excitement from a thin cabinet – and therefore has no trouble keeping you engaged. It won't give models from high-brow brands like Paradigm or DALI anything to worry about, but its energetic performance will banish the memory of your TV's speakers.

Play an action-packed movie like *Batman vs Superman: Dawn of Justice* and you get a soundfield bristling with lively, incisive effects. In the opening scene as buildings blow up and tumble to the ground, the room fills with the sound of falling debris.

Dialogue is clear and focused, which means it's particularly good with speech-based TV programmes. Flip to something like *The One Show* and you can learn about garden birds and the joys of recycling in absolute pin-sharp clarity.

SPECIFICATIONS

DRIVE UNITS: 2 x full-range drivers **AMPLIFICATION (CLAIMED):** 300W **CONNECTIONS:** HDMI input; HDMI output (ARC); optical digital audio input; 3.5mm input; USB port **DOLBY TRUEHD/DTS-HD MA:** No/No **SEPARATE SUB:** Yes. 6.5in driver **REMOTE CONTROL:** Yes **DIMENSIONS:** 908.5(w) x 53.5(h) x 70.5(d)mm **WEIGHT:** 2.0kg

FEATURES: Dolby Digital 5.1 and DTS 2.0 decoding; TV SoundConnect; Bluetooth; Surround Sound Expansion; six presets (Standard, Music, Clear, Sports, Movie and Night); 3D video passthrough; MP3, AAC, WMA, WAV, FLAC, WAV playback; Anynet+ CEC; Samsung Bluetooth Remote App; optional SWA-8000S wireless rear speaker kit

PARTNER WITH



SAMSUNG SWA-8000S: This £100 add-on consists of two 13cm-high rear speakers that hook into a larger wireless receiver (requiring mains power) and are fed audio info from the 'bar. Use it with the HW-K450 to create a 4.1 surround setup.

However, noisy movies can be a little wearing over long periods, and when you turn up the volume certain effects – such as Doomsday's hearty roar in *BvS* – sound spiky. It's an improvement on previous Samsung affordable 'bars, but the rough edges are still there.

The twin-driver array throws out a healthy amount of detail. High frequencies are on the clinical side, but this does a good job of making the soundstage feel airy and open. Engage the surround mode and the stage is endowed with a greater sense of width, with the usual caveat that it's not real surround sound.

Low-frequency moments are joined by a deep rumble from the sub. This bass box does a better job than expected. You get a sense of Doomsday's heft as he leaps around the screen, footsteps popping and thudding enthusiastically. It could be tighter, though, and the leading edges could be faster – there's a touch of overhang and booming when there's a lot going on. But these things are more likely to bother fussy audiophiles, rather than the casual listeners targeted here. On the whole, it brings the weight and scale required.

Music playback is acceptable but the Samsung's delivery lacks the emotion and warmth of the best soundbars, meaning your favourite tracks don't have that draw-you-in quality. The innate clarity and attack work in its favour though, plus there's ample detail and the subwoofer finds depth in beats and basslines.

Decent punt

The HW-K450 is a decent punt if you don't want the trappings of multiroom and networked music streaming. The lively, entertaining sound and design are impressive for the money, and the TV SoundConnect feature will appeal to Samsung screen owners, but those looking for refinement or subtlety won't find them here ■

1. The 'bar features HDMI connections, but doesn't support 4K video passthrough

HCC VERDICT



Samsung HW-K450

→ £280 → www.samsung.co.uk

WE SAY: A decent non-networked soundbar with nice features and engaging performance. Ideal for a mindless movie night but lacks the subtlety needed to hit the audiophile big-time



AV INFO

PRODUCT:
'4K enhanced' home
cinema projector
with HDR

POSITION:
Below the new
laser-light
EH-LS10500

PEERS:
JVC DLA-X5000;
Sony VPL-HW45ES

The EH-TW9300 is the cheapest PJ yet to promise 4K excitement, but it's HD at heart, says **Steve May**

Epson flatters to deceive

When is 4K not UHD? When it's a pixel-shifting faux-K projector, that's when. JVC started the trend, with its eShift line, and then Epson followed suit, beginning with last-year's laser-based EH-LS10000, and now with a trio of traditional lamp models.

The EH-TW9300 (ranged between the EH-TW7300 and EH-TW9300W, which adds wireless connectivity) retails at a reasonable £2,900. 4K and HDR-compatible, is it the bigscreen model we've all been waiting for?

On to that later. First thing to say is that it's certainly a large projector. It dwarfs the brand's regular Full HD

models, yet with clean lines still manages to look moderately elegant. The lens is central and sports an electronic cover. It's flanked by an intake vent that pulls cool air in from the left and exhausts hot to the right.

As befits its aerodynamic design, there are no on-body controls.

Instead they're hidden behind a sliding left-hand side latch. Here you'll find a menu and directional keypad for hands-on navigation.

Rear-panel connections are also hidden behind a pop-off modesty flap. There are two HDMI inputs, as well as VGA, Ethernet, 12V trigger and RS-232 ports.

While the EH-TW9300 makes much of its 4K compatibility, only one of those HDMI connections is 4K/HDCP 2.2 enabled.

The projector supports 3D playback, but no active 3D glasses are supplied, which seems a bit miserly.

Brightness is rated at 2,500 Lumens, via a 250W lamp that's said to last 5,000 hours in Eco mode, or 3,500 if you run it on its high setting.

A touch of luxury

Getting up and running with the EH-TW9300 is a bit hit-and-miss. On the positive side, remote zoom and focus add a touch of welcome setup luxury, and lens shift is generous, offering 96.3 per cent vertical and 47.1 per cent horizontal adjustment. With a 2.1x zoom in play, throw ratio extends from 1.35 to 2.84:1.

Aiding installation are ten aspect ratio memory presets, and an anamorphic mode, should you want to install a third-party anamorphic lens (which will doubtless cost more than the projector itself).

So far so good, but the menus can be infuriatingly ambiguous. Quite what is going on beneath the hood of the EH-TW9300 is often a mystery. The user manual throws little light on the various viewing modes, and often going off-piste to optimise a particular source turns out to have disastrous consequences for other content.

For example, explore the advanced signal menus and you'll find a quartet of manual HDR modes, should you want to disengage Auto sensing. It's not clear from any of the documentation how these differ. However, HDR1 is actually intended for HDR content with peaks of 500 nits, HDR2 1,000 nits, HDR3 4,000 nits and HDR4 10,000 nits.

But pop the projector on manual HDR2 mode (for UHD Blu-ray) and subsequent SDR images look horribly blown out and over exposed. The only option for most viewers will be to let the projector manage things automatically.

There are seven viewing presets: Dynamic, Bright Cinema, Natural, Cinema and Digital Cinema, plus two dedicated 3D modes (Dynamic and Cinema). Tweakers can adjust RGB (offset and gain), along with hue, saturation and brightness for RGB and CMY. There's also an ISF calibration option.

Predictably, Dynamic ups the razzle dazzle, but the projector becomes audibly louder as the fans ramp up accordingly. You'd need to locate the EH-TW9300 some distance from the viewing area to make this mode palatable.

A better option is Bright

Cinema, which tames the fan noise a tad without sacrificing pop (or skin tone authenticity). This also proves a good option when there's some ambient light around.

The Cinema setting drops a significant amount of contrast, but allows the projector to settle into its quietest mode, just 20dB (which is really quiet). In a fully dark theatre, this contrast cutback isn't quite the sacrifice you might imagine. That said, the Digital Cinema preset looks a tad more punchy, and would be my go-to movie mode of choice. Fan noise here remains subdued.

Dynamic contrast is said to be 1,000,000:1. That's a suspiciously neat figure, but snap is definitely evident when the First Order's Star Destroyer (*Star Wars: The Force Awakens*, Blu-ray), is held in sharp relief above Jaku. The portside is bright, while deep space remains ominously black – but there's also copious detail retained in the ship's shadowed hull.

Unsurprisingly, the projector delivers its best contrast with auto iris engaged (choose from High Speed or Normal). You can hear this working as an insistent grumble as the blades move back and forth, however you're unlikely to notice the noise over a full sound system. Significantly, I didn't find it visually distracting either.

Texture definition is excellent. The bandage wrap of Rey's high fashion arm-socks hold copious detail, while Finn's leather jack is richly distressed. When we first cut to Kylo Ren, there's fine detail and film grain clearly evident in his black helmet. The picture is extremely cinematic.

While image intensity is some way off that of the laser-driven EH-LS10000, the projector is more than capable of lush reds and a superior black level. Kylo Ren's cloak features lots of below black detail, a subtle sense of which is retained by the Epson.

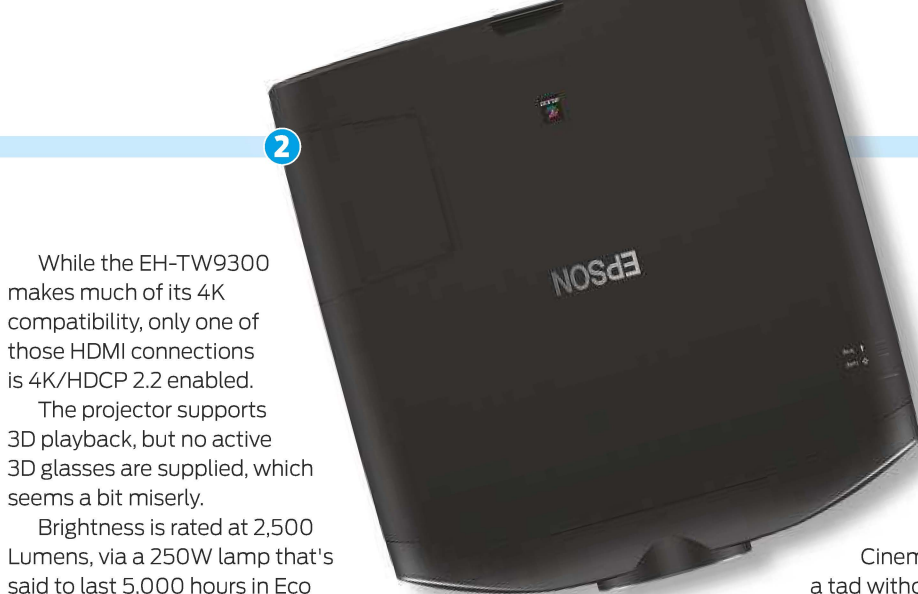
Switching sources

For this audition, I used the projector with both 4K and HD sources. Epson describes the EH-TW9300 as

1,2. The EH-TW9300 measures over 50cm wide – not a coffee-table PJ, then!

3. Rear inputs sit behind a pop-off flap

4. The remote offers focus and zoom control





'4K enhanced', but the terminology is a little disingenuous. The 4K Enhancement Technology shifts each pixel diagonally by 0.5 pixels to double image density.

That said, at times it's easy to forget that you're watching a cooked-up 4K image, not least because the provenance of much native 4K material is far from clear. The relentless action of *Mad Max: Fury Road* (UHD Blu-ray) doesn't look any less sharp on this Epson than it does on a 4K flatscreen. Although there's plenty of difference when it comes to colour and dynamic range...

You see, I couldn't help feeling the EH-TW9300 is a grifter at heart. Hooking up a Panasonic DMP-UB900, the disc player is persuaded to output a 2160p image with HDR 10 metadata. However, if you're expecting to see a typical HDR performance you're going to be disappointed. While there's a decent contrast range, you just don't get anything like HDR highlights. That said, home cinema projectors don't really deliver HDR-highlights like a flatscreen anyway, so that's not necessarily a big demerit.

However, opting for a 4K source doesn't necessarily guarantee the best results either. Running *Fury Road* into both HDMI inputs, one 4K the other a 2K disc from a regular BD player, provided an interesting comparison. The first time we see Max, before he snacks on a two-headed lizard, the 4K frame appeared flat compared to the 4K enhanced Blu-ray source. It's as if the Epson is dropping some of its composure when trying to interpret the HDR image.

Bizarrely, this projector won't accept a 4K signal from the Samsung UBD-K8500 UHD Blu-ray player. While I didn't have a sample to test, Epson says this is because the PJ 'is looking for a 4:2:2 12-bit signal which the Samsung is unable to produce.' Apparently, connecting the Samsung to the EH-TW9300W, via its WiDi transmitter, solves this problem. This anomaly may also explain why the PJ wouldn't work at all with a Sky Q box set to output 4K with 10-bit colour. The only workable UHD option was to drop the Sky box to 8-bit.

That said, Sky pictures look excellent. *The Martian*, an SDR UHD download, appeared supremely sharp, with bold hues and vivid contrast. The Martian landscapes exhibited extreme richness. Pixel-shifted Sky HD also impressed.

And this is what's most important – the 4K enhanced EH-TW9300 is a fine home cinema projector. It's

SPECIFICATIONS

3D: Yes. Active shutter (glasses optional) **4K:** Full HD 1,920 x 1,080 (with pixel-shifted 3,840 x 2,160) **HDR:** Yes. HDR 10 **CONNECTIONS:** 2 x HDMI inputs; VGA; Ethernet; USB (service port); 12V trigger; RS232 **BRIGHTNESS (CLAIMED):** 2,500 Lumens **CONTRAST (CLAIMED):** 1,000,000:1 **DIMENSIONS:** 520(w) x 170(h) x 450(d)mm **WEIGHT:** 11kg

FEATURES: 3LCD projector with 4K Enhancement; claimed lamp life of 5,000 hours in Eco mode; Dynamic, Bright Cinema, Natural, Cinema, Digital Cinema, Dynamic 3D and Cinema 3D modes; 1.35-2.84:1 throw ratio; Frame Interpolation and Super Resolution image processing; claimed 20dB fan noise

PARTNER WITH



EPSON ELP6503: You can add 3D playback to the Epson projector's bow with the brand's optional active shutter spex. Available for around £65 a pop, they offer a 40-hour battery life before recharging is necessary and weigh a mere 35g.

considerably cheaper than its nearest native UHD rival, and there's a reason for that – it's not 4K. Indeed, it often looks best with SDR HD (rather than UHD HDR) sources. Colour vibrancy, black level performance and detail are all superb. It's big, for sure, but runs extremely quiet and has an excellent auto iris system.

It's an interesting new addition to the high-performance projector market, and the £3,000 price will make it appealing to those tired of standard Full HD machines. Well worth an audition – just don't expect flatscreen-style HDR heroics ■

HCC VERDICT



Epson EH-TW9300

→ £3,000 → www.epson.co.uk

WE SAY: This big pixel-shifter may boast token 4K and HDR compatibility but it's more of a high-spec HD model that deserves plaudits for quiet running and excellent colour and detail

3. A 2,500 Lumens output is claimed from the Epson's traditional lamp

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Casting light on HDR

Ambilight and HDR UHD? **Steve May** takes a shine to Philips' beefed-up 6 Series UHD TV line in the shape of this keenly-priced 55-incher

THE FUTURE'S LOOKING bright for low-cost 4K TVs. With resolution alone no longer a guaranteed draw, Philips has upgraded its entry-level Series 6 with Ambilight, and thrown in HDR (High Dynamic Range) compatibility for good measure.

And while you can pick up this 55in set for less than £700, design is definitely a cut above the budget norm. The bezel may not be ultra narrow, but it comes in an elegant gunmetal grey finish. The screen itself resides on a so-called 'pinch' stand, which is basically two bolt-on A-frame feet. The whole shebang looks very tidy.

There are three models in the range: the 55PUS6401 reviewed here, plus 49in and 43in stablemates.

Not so dumb

Even budget sets these days are smart, and this Philips is Android-flavoured. To be fair, Google's platform is looking a good deal more stable than it did a year ago, although using it still feels like rifling through a neighbour's cluttered box room. Navigation is sprightly enough, though, thanks to a quad core processor, and visually it's quite neat.

Star attractions include BBC iPlayer (your only catch-up TV option, currently), Vimeo, Wuaki.tv, Amazon Video, Chili Cinema, DailyMotion and Deezer. Netflix supports 4K streams. There's a plethora of casual games available.

VOD is joined by an internet browser, but this is largely useless as it suffers from all manner of weird formatting problems when moving between sites. But who surfs the 'net on their telly anyway?

Connections are par for the course, although only two of the four HDMI inputs support HDCP 2.2, the prerequisite for 4K content sources like UHD Blu-ray players and set-top boxes. Your tuner choice is Freeview HD or generic satellite.

The remote control is a standard IR zapper – there's no usual Philips keyboard on the flip. It's somewhat directional, too, so you'll often find yourself consciously aiming at the set in order to get a response.

Feed me!

Picture quality is mostly agreeable, with the set looking its best when fed 4K content. Ultra HD detail is sharply delineated and there's a ribald approach to colour. The 55PUS6401 is tuned for eye candy, if not accuracy. You know hues are a little off when Hellboy looks an orangy shade of Trump, but there's no doubting the precious glint of the Golden Army.

Predictably, you'll need to manually configure the 4K HDMI inputs. There's a choice of 4:2:0 or 4:4:4/4:2:2. The former should be your setting for the Sky Q Silver 4K set-top box, while the secondary option really is only

AV INFO

PRODUCT:
Mid-range Ambilight
HDR 4K TV

POSITION:
Philips' entry-level
HDR model

PEERS:
Samsung
55KU6470;
LG 55UH850V

relevant if you have a 4K UHD Blu-ray deck capable of picture processing up to that level of colour sub-sampling. As it happens, this set is a fine match for Sky's 4K UHD service. The level of snap in the 2160p picture is enough to make even Adam Sandler's *Pixels* seem inviting.

Philips is, of course, notorious for the sheer variety of image processing it proffers. But here all the visual shenanigans seem justified. The brand's Pixel Plus Ultra HD image processor (not the more advanced Pixel Precise Ultra HD or Perfect Pixel Ultra HD engines found higher up the brand's range) aids definition when the source is lacking while a Natural Motion processor keeps things smooth.

As it transpires, the 55PUS6401 isn't big on motion image clarity. The set doesn't use science to maintain motion resolution, but it can reduce horizontal picture judder. Stick with the Minimum Natural Motion setting; Medium and Maximum both introduce unwanted artefacts.

Pass the salt

So what about HDR? Well, it's best to take the TV's HDR compatibility with a pinch of salt. The screen isn't able to fully service high-brightness content, as the panel peaks at around 350 nits. However, HDR images do look well balanced and there's a genuine sparkle to some sequences that will reward those who partner with a compatible source.

There's not an awful lot of user adjustments to get stuck into here, although you are offered a good number of image presets – Personal, Vivid, Natural, Standard, Movie, Photo, ISF Day and Night and Game. Natural is a sensible default for everyday viewing. There's also a Light Sensor to automatically adjust the image based on ambient lighting conditions, although I quickly switched it off for this audition as it can prove a distraction.

Give the Philips HDR content and image choices become HDR Personal, HDR Vivid, HDR Natural, HDR Standard, HDR Movie and HDR Photo. The 6401 is unusual in that it also offers a low-lag HDR Game mode. This will be of particular interest to PS4 and Xbox One S owners. Colour, sharpness and contrast settings are all adjustable when watching HDR content, but there's no significant difference in terms of clarity between the various HDR presets. Nor does the 55PUS6401 quite deliver the 2160p impact you can witness on more expensive rivals.

And there are more obvious caveats when it comes to performance. Although direct-lit rather than edge-lit, the screen's backlight uniformity is poor, with puddles of light evident around the edge of the frame.

Black levels are also limited. The TV employs Philips' Micro Dimming Pro system, which uses proprietary software to analyse 6,400 picture zones. However, this clearly doesn't help it deliver black levels of any profundity in a fully dark room. This shortcoming does become less of an issue when viewed in bright environments, as blacks tend to look subjectively darker, but that's not going to be enough for those craving authentic cinema-style movie sessions.



SPECIFICATIONS

3D: No **4K:** Yes, 3,840 x 2,160 resolution **HDR:** Yes, HDR 10 **TUNER:** Freeview HD; satellite HD **CONNECTIONS:** 4 x HDMI inputs; Scart; component; optical digital audio output; 3 x USB ports (1 x 3.0, 2 x 2.0); Ethernet; headphone; analogue audio input **SOUND:** 2 x 10W **BRIGHTNESS (CLAIMED):** 350 nits **CONTRAST RATIO (CLAIMED):** N/A **DIMENSIONS (OFF STAND):** 1,239(w) x 725(h) x 85(d)mm **WEIGHT (OFF STAND):** 16kg

FEATURES: Built-in Wi-Fi; Pixel Plus HD processing; Philips Natural Motion processing; Micro Dimming Pro; two-sided Ambilight with Hue compatibility; HDCP 2.2 support on two HDMI inputs; Android OS; quad-core processor; USB recording; multimedia file playback

PARTNER WITH



WUAKI.TV: Not one of the VOD big-hitters, but this service offers a PPV model (rather than monthly subscription) and has a good range of content, including plenty of new release films and major US/UK TV series.

Conversely, because the backlight technique used here is relatively unsophisticated, there're no curious anomalies around areas of high contrast. An HDR sequence of fireworks offers plenty of explosive highlights, without obvious clouding or halos – because that surrounding night sky isn't actually trying to be pitch black.

The Ambilight on offer here is of the basic two-sided variety and can be set to follow onscreen action or audio cues (with variations therein). There's also a full-colour mode – chose from Red, Green, Blue, Cool White or Warm White – to provide bias lighting to create a more relaxed viewing atmosphere. There's also some simple wall colour correction offered and the option to integrate Ambilight with a Philips Hue smart lighting system.

The company has routinely delivered surprisingly high-quality audio from its TVs, but that's not a tradition respected here. This 55-inch 6401 sounds thin and scratchy, a performance which is only exasperated by 20W of amplification.

A genuine bigscreen

The 55PUS6401 has foibles, but when it comes to sheer value this 6 Series set scores well. It's a genuine bigscreen TV at a tempting price. Ambilight always guarantees extra brownie points, and the set's native UHD clarity is definitely seductive, even while the meagre black level response and absence of HDR punch will turn off premium AV-Holics. I'd like to have seen uniform HDCP 2.2 support, but the provision of 4K streaming helps alleviate the shortfall ■

1. There are also 49in and 43in versions of the PUS6401 available

2. Although HDR compatible, the set claims a 350-nit level

HCC VERDICT



Philips 55PUS6401

→ £650 → www.philips.co.uk

WE SAY: This attractive mid-ranger offers reasonable 4K image quality for the price and wins points for Ambilight and (low-level) HDR compatibility

Budget ambition

LG's BP556 does rather more than just spin Blu-ray discs.

Steve May wonders if multiroom, not 4K, is the best reason yet to update your player

Don't look for a front display.
There isn't one



SPECIFICATIONS

ULTRA HD: No. **UPSCALING:** Yes. To 1080p
MULTIREGION: No. Region B BD/R2 DVD
CONNECTIONS: 1 x HDMI output; 1 x coaxial digital audio output; Ethernet; USB
MULTICHANNEL ANALOGUE OUTPUT: No
SACD/DVD-A: No
DIMENSIONS: 270(w) x 43(h) x 195(d)mm
WEIGHT: 0.87kg

FEATURES: Media playback via USB; iOS or Android app control; OTT streaming services (Netflix, Amazon, YouTube, Now TV); DLNA media playback (MP3, WMA, AAC, WAV, FLAC, MPEG); built-in Wi-Fi; MusicFlow

IT'S TEMPTING TO think that all developments in Blu-ray are restricted to the high-end, and are largely centred around Ultra HD. But peer at the mass market and you might be surprised by what's going on.

LG's BP556 sells for a couple of discs less than £100, but could give your system a welcome refresh. How? This Blu-ray player doubles as a streaming content hub, has some neat smartphone functionality, and works with LG's MusicFlow multiroom audio system.

Style counselling needed

In terms of design, the deck is dressed in a black, textured plastic wrap that manages to both grab your attention and baffle you at the same time. Yet as the chassis is just 270mm wide, you should be able to hide it fairly easily.

There's no display on the front fascia, just a left-set disc draw, USB port, and power and eject buttons. Around the back, you'll find a single HDMI output plus coaxial digital audio (not optical, though) and Ethernet jacks. Wi-Fi is another networking option.

LG's user interface is crisp and graphical. While it ships with a dumpy IR remote to navigate, the player can also be used with LG's AV Remote app (for iOS and Android devices). This opens the door to Private Listening, which allows you to route audio to your smartphone headphones of choice. This is a neat feature also

AV INFO

PRODUCT:
Budget 3D BD spinner with multiroom

POSITION:
This is actually LG's range-topping(!) Blu-ray player

PEERS:
Sony BDP-S1700;
Samsung BD-J5900

found on LG soundbars, and perhaps a life-saver in busy households.

Integrated content services include Now TV (for paid-for Sky content), Netflix, Amazon Video, Spotify, BBC iPlayer, YouTube, Dailymotion and Blinkbox, aka the Talk Talk TV store. A solid selection, but the lack of some terrestrial catchup means this can't be considered an all-powerful smart upgrade.

The player is no slouch when it comes to disc loading. A Java-rich movie disc went from tray-in to menu in 44 seconds; a stripped-back concert platter did the same in just 29.

Blu-ray image quality is similarly unfettered by price point. Video plays out smooth and rich in hue and detail. You could shoot the BP556 out against models costing far more, but that seems almost churlish. Guillermo del Toro's *Crimson Peak* looks lush and cinematic here, while the DTS:X soundtrack is astonishingly dynamic. The movie's shadowy spectres don't budget their scares.

There are a number of things you need to adjust in the menu to make the most of its performance, though. If you're using the player with an AVR or high-end soundbar, increase the audio sampling frequency from a default 48kHz to 96kHz or 192kHz. If you don't, it'll downscale. The digital output of the deck should also be left in Auto mode, to bitstream to a waiting AVR. Select PCM and the player will encode soundtracks to stereo.

Joining in the party

MusicFlow compatibility is the deck's secret weapon. The LG app will pick up any compatible speakers/soundbars on the same network, which you can then elect to stream to. It's primarily intended for music playback.

I experienced no audio delay playing Blondie's *Parallel Lines* CD simultaneously through an AV sound system and a standalone MusicFlow speaker. You can even multiroom music soundtracks, but bitstream Dolby or DTS to an AV receiver and there's a delay between the main system and any connected network speakers. This can be corrected by letting the player decode to stereo, at which point all devices sync up.

Away from MusicFlow, LG SmartShare identifies DLNA media servers, but usability is a tad limited. The deck does a decent enough job with music, playing MP3, WMA, AAC and FLAC, but not DSD. Video playback, however, is next to useless. MKV isn't supported, and when it did find an MPEG clip it liked, the audio track went unplayed.

What is perhaps surprising is just how well behaved the BP556 is in other areas. I've owned many cheapo Blu-ray boxes that creak and rattle during playback, but this player is refreshingly quiet.

Less of a budget deck, the BP556 is more a musically-minded HD media player with a number of appealing features. The addition of Now TV, Netflix, Amazon Video and YouTube to Blu-ray playback make it a useful media hub, and the fact that it acts as a multiroom source is a bonus. Cinephiles may rail, but I reckon it's a bit of a bargain ■

HCC VERDICT



LG BP556

→ £85 → www.lg.com/uk

WE SAY: The addition of MusicFlow multiroom audio streaming makes this media-savvy budget disc-spinner worth a look.

Humax Eye

With this 'net camera, **Martin Pipe** adds surveillance functionality to his Humax PVR

HUMAX HAS ENTERED the security market. The Eye is a tiny wireless camera intended for indoor use, with a magnetic base that can swivel, raise or lower to obtain the desired view.

As the Eye's lens is very wide-angle, there's a degree of 'fish-eye' distortion. If something changes within its Eye-sight, recording automatically begins. The result is streamed, via a 'net connection, to a cloud server for storage. You're then alerted by e-mail.

An app (Android/iOS), is needed for setup. Initial link with the Eye is made via Bluetooth; from here you select your Wi-Fi network. As many as 16 individual cameras can be added.

You can specify how alerts are delivered, monitor 'live' pictures and define the motion-sensitivity zone. The degree of sensitivity is adjustable too, so that recording is less likely to be triggered by, say, your cat having a stroll.

A rolling seven-day loop of cloud-storage is bundled – early next year, a 30-day extension will be available for a modest monthly outlay.



Clips, which are stamped with time and date, can be viewed online or via the app, as well as downloaded to your device.

The Humax comes into its own if you have one of the brand's set-top boxes; I've been using the FVP-4000T. Among the apps installed on this is one dedicated to the Eye.

I spy with my little Humax Eye...

You can use it to select recordings for viewing, but they can't be archived to the PVR's HDD.

The 1,280 x 738 video is captured at a max bitrate of around 1Mbps. This means large areas of rapid change are inundated by compression artefacts. Usually, though, much of the frame will be static and artefacting won't be problematic. Pictures are marked by decent colour, crisp detail and uniform focus. Audio is acceptable, albeit rather quiet.

The Eye isn't perfect – a lack of onboard storage make it no use if your 'net connection is down, for instance – but if you need to spy on what your kids are up to in the cinema room, it could be ideal ■

HCC VERDICT



Humax Eye

→ £130 → www.humaxdigital.com/uk

WWW.LG.COM/UK/£85

LG MusicFlow P7

Mark Craven listens to a shrunken speaker from LG and wonders if he's missing something

LG'S MUSICFLOW PRODUCT line is where the brand has joined the multiroom audio arms race. Yet oddly, this P7 speaker, while claiming MusicFlow heritage, isn't actually part of that gang. It's a Bluetooth portable that can sync to an LG TV (via the Sound Sync function) or to another P7 speaker for a stereo array (Dual Play), but it won't mesh with other LG MusicFlow models like its soundbars and BD decks. The MusicFlow Player app gives it the cold shoulder; you need to use the

MusicFlow Bluetooth app instead. Confused? Good. So was I.

The P7 measures a dinky 18cm across and charges its internal nine-hour-rated battery from a microUSB connection. Aiming to still produce a credible performance from such a small chassis is a quartet of front-facing drivers. Two are passive, the other given 10W a pop.

The P7 is an average performer, with a predominant mid-range battling with muddy

bass and a lack of high-end nuance and clarity, but it has the advantage of being affordable. KEF's Muo, for example, is of similar dimensions, performs a heap better, but is three times the money.

Push it loud and the speaker obviously loses composure. The power here is adequate for dinner parties, but not all-night raves.

Inputs are 3.5mm or Bluetooth (up to three devices can be paired). A top dial offers playback controls, with flashing icons denoting status and charging.

Design is a strong point. The speaker has heft in the hand and a little underbelly plinth to raise it off your desk/kitchen counter/ wherever. Unfortunately, though, the P7 can't match its looks with premium sound quality ■



Battery life is rated at nine hours

HCC VERDICT



LG MusicFlow P7

→ £85 → www.lg.com/uk



Arcam continues to go Solo with AV

Disc-player/amplifier combis are a rare sight these days, but **Danny Phillips** suggests there's much to admire in this Blu-ray box – provided you're aware of its limitations

THERE'S SOMETHING DELIGHTFULLY old school about the Solo Movie 5.1, Arcam's high-end home cinema in a box. Firstly, it's a straight-up 5.1 system with no time for new formats like Dolby Atmos or DTS:X. The built-in disc player won't handle Ultra HD Blu-ray either, instead focusing on Blu-ray, DVD, CD and SACD. And power it up and the splashscreen is emblazoned with a huge Arcam logo, a throwback to the early days of DVD with nary a smart app to be seen. The remote and basic onscreen menus have a no-nonsense mid-noughties vibe.

But therein lies the point of the Solo Movie. It's aimed at those who care about performance, but not cutting-edge frills and flashy presentation or complicated speaker setups. And for those who want to simplify things further, a 2.1 version is also available.

AV INFO

PRODUCT:
5.1-channel AV receiver/BD player all-in-one

POSITION:
One of six products in the Solo range alongside 2.1 and Music versions

PEERS:
Separate AVR and disc player

Weighing in

This is the third-generation Movie system of Arcam's Solo series, and like its forebears it's a beautifully sculpted machine. The metal bodywork has brick-like solidity, providing a sturdy platform for the premium electronics. And if weight is any indication of quality, this 12kg unit should be a belter.

Such robustness doesn't come at the expense of style. A curved top edge cascades elegantly into a slanted fascia that houses a large

LED display panel. It can be dimmed using the remote and packs in the essential info without appearing cluttered, a tricky thing to pull off.

Internally, the pre and power amp stages are based on Arcam's FMJ AV separates while the video section shares DNA with its UDP411 disc player (like the UDP411 there's no DVD-Audio support here. So if you were hoping to reacquire yourself with that hi-res Peter Frampton platter you bought 10 years ago, you're out of luck).

You'll find a decent amount of sockets on the back, but even these are a bit of a throwback. The four HDMI inputs are all v1.4b and not 2.0, which means they won't support 4K/60p, HDR or HDCP 2.2 from UHD Blu-ray players, should you want to upgrade from the Solo's built-in Blu-ray deck at any stage. This isn't a major problem, though. All of the 4K Blu-ray machines launched so far have dual HDMI outputs, allowing you to pipe audio signals to the Arcam while sending 4K pictures to your TV separately. A bit of a faff, but workable.

Other inputs include optical, coaxial, analogue phono, 3.5mm minijack and a USB port. There's an Ethernet port, antenna inputs for Wi-Fi, Bluetooth and DAB radio, plus IR and RS-232 terminals for custom installers.

The Solo Movie furthers its audiophile credentials with 5 x 60W of Class G amplification, tech used across Arcam's stereo and AV ranges and, says the brand, beneficial in terms of greater transparency and efficiency than more common Class A/B and Class D amps.

There's nothing old school about the Solo's streaming functionality. Hooked up via Wi-Fi or Ethernet, it pulls hi-res





FLAC, WAV and AIFF files (up to 192kHz/24-bit) from PCs and NAS drives, alongside lossy fare and video formats. It played ball with my WD NAS drive, streaming tunes without having to be asked twice. It also navigated through my labyrinthine library without so much as a flicker.

The music streaming menus are utilitarian grey boxes but they get the job done. Arcam's updated MusicLife iOS app is more fun. This lets you control the unit, browse

'The presentation is quick, agile and attacking, keeping excitement levels high and goading you to go louder'

music libraries and stream from Tidal, Qobuz and Deezer. This new version adds integrated 'net radio access and built-in Control4/Crestron operation. The lack of an Android version is a bit of a downer, though.

Spine tingles on tap

Luxurious is the word that springs to mind when describing the Arcam's performance. If you want frightening power, holographic staging and spine-tingling detail, this could be the system for you.

The clarity and transparency of the Solo's sound is staggering. It's a cliché but it really does feel like you're opening a window on the action and hearing it for real. That makes it surprisingly easy to suspend disbelief during the absurd-but-entertaining *Batman v Superman: Dawn*



SPECIFICATIONS

DOLBY ATMOS: No. Dolby TrueHD **DTS:X:** No. DTS-HD MA **THX:** No **POWER OUTPUT (CLAIMED):** 5 x 60W (into eight Ohms) **HDMI:** 4 x inputs; 1 x output **AV INPUTS:** 2 x digital audio (1 x optical, 1 x coaxial) **ANALOGUE MULTICHANNEL INPUT:** No **MULTICHANNEL OUTPUT:** No **MULTIROOM:** No **VIDEO UPSCALING:** Yes. To 4K **DIMENSIONS:** 420(w) x 414(d) x 90(h)mm **WEIGHT:** 12kg

FEATURES: BD, DVD, CD and SACD playback; Wi-Fi; Ethernet; USB; RS-232; aptX Bluetooth; UPnP streaming; FLAC, WAV, AIFF up to 192kHz/24-bit via network/USB; MP3, WMA, AAC, OGG, WMV, MKV and MP4 playback; DAB/DAB+ tuner; Tidal, Qobuz, Deezer, 'net radio and Control4/Crestron operation via MusicLife iOS app

PARTNER WITH



KEF R100 5.1: A standmount speaker package to fit in with the Arcam's clutter-reducing ethos, yet high-spec enough to do the Solo Movie 5.1 justice. Available for around £2,750, it mixes the full-range R100s (pictured), R200c centre and potent R400b sub.

of *Justice*. The third-act dust up with a squad of faceless goons is a relentless barrage of gunshots, explosions and punches, but the Arcam's ability to tease out the nuance in every effect stops it all sounding like white noise.

Finesse is apparent during quieter moments too – this high-class amp reveals the gentle croak in Ben Affleck's voice during the prologue, while the hushed rural ambience at the cemetery is clear and immersive.

The presentation is quick, agile and attacking, keeping excitement levels high. Leading edges are crisp and the well-rounded mids never flirt with brashness. It also seems perfectly comfortable operating at loud volumes – in fact, it practically goads you to crank it higher, the Class G amplifier stage taking dynamic swells in its stride.

Integration is another of the Arcam's assets. Weighty bass notes from the sub fuse tightly with the other speakers, while fluid steering and tonal uniformity across channels ensure an immersive soundstage.

It's much the same with music, whether streamed or played from disc. This puts you inside a song like few all-in-one systems can. *Raios Do Sol* by Resolution 88 benefits from pin-sharp percussion, rich, full-bodied saxophones and agile basslines, while the atmospheric organ of *Waves Know Shores* by James Blake has a lovely sense of space and scale; the purity of Blake's voice twanging the heart strings.

A real pleasure

This ability to connect the listener to the material makes the Solo Movie 5.1 a real pleasure. Its foibles are obvious – no truck with HDR, no support for seven-channel speaker setups, a few file formats ignored, no Android app – but it's a reminder that technology is about more than always pushing forwards. The sheer thrills you experience with this all-in-one make it worth consideration ■

HCC VERDICT



Arcam Solo Movie 5.1

→ £2,200 → www.arcam.co.uk

WE SAY: A powerful, poised, sweet-sounding five-channel amp with convenient disc/streaming integration. Feature set won't suit everyone, but you can't argue with its performance

1. The Solo Movie 5.1 offers a claimed 5 x 60W of Class G power

2. iOS device owners can swap this handset for Arcam's MusicLife app controller

3. Top-panel buttons provide easy access to menus and volume



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Soundbar alternatives

Thinking of buying a soundbar for your second-room set? If you also care about music, there are some other options you might want to consider, says **Ed Selley**

THE SOUNDBAR MARKET now makes up a massive chunk of the total sales of AV equipment in the UK. Potential buyers are given plenty of choice, with models available at a dizzying number of price points and with varying levels of functionality, including multiroom capability, Dolby Atmos support and dedicated subwoofers.

However, if you listen to as much music as you watch movies/TV, or are looking for a setup to perform double duties in an all-purpose environment (a bedroom or office, for instance) you might find typical soundbars somewhat lacking as genuine stereo sources. A more traditional approach, allowing for flexible speaker placement, could be in order

— especially as the hi-fi world is packed with smart-looking, well-connected gear, and in some situations such designs may be easier to accommodate than a soundbar.

So what happens if you use one of the clutch of one-stop stereo systems

'You might find that a hi-fi stereo system is easier to house and brings benefits when it comes to music'

to perform a bit of TV and film duty?

To find out, we've rounded up four likely suspects from well-known marques, priced between £280 and £600.

KEF's latest Eggs, Naim's innovative Mu-so Qb (a single-box design but with serious stereo ambitions), the BT3 double act from Q Acoustics and Yamaha's NX-N500 were all connected to a Panasonic TV via an optical cable, then invited to get to grips with choice cuts from *Pacific Rim* on Blu-ray and TV frightener *American Horror Story*, plus indie rockers Wild Beasts via Tidal from an Onkyo hi-res audio player.

Can these hi-fi heroes cut the AV mustard? Read on...

UK.KEF.COM/£350

KEF Egg Wireless

A curvy duo that look great alongside your flatscreen, but are they, erm, 'egg-cellent'?

THIS KEF SYSTEM will be instantly recognisable to anyone who has been following home cinema audio for any length of time. The Egg Wireless Digital Music System (to give it its full name) adapts two of the latest iteration of the company's distinctive 'Egg' speakers into an active pair. Each cabinet uses a 50W amplifier to power a Uni-Q driver, which mounts a 0.75in tweeter centrally within its 4.5in midbass unit, augmented by a front-mounted bass port.

In terms of inputs, you get a driverless USB port, aptX Bluetooth and an optical digital audio connection on a 3.5mm jack (which KEF supplies). For reasons unclear, this input is stuck around the side of the foot of one of the speakers, which can make your setup look a bit ungainly. Also note that the speakers need to be connected together via a bundled cable. Black and white finishes are an option, in addition to the 'frosted blue', pictured.



As the smallest speakers in this roundup, it isn't too surprising to find that the KEFs have the weakest bass output, but that's not to say there's a lack of power and this pair does a good job of sounding bigger than it actually is.

KEF's grilles can be removed if you want drivers on show

The monster mayhem of *Pacific Rim* is handled with assurance and a real ear for detail, while dialogue is kept clear over and above the destruction. The soundstage isn't expansive, but it's easy to track movement of effects across the screen. The brooding and oppressive *American Horror Story* is also dealt with effectively; the KEFs nail the atmospherics via impressive clarity.

When switched to music, the limited bass extension makes itself more apparent but the Eggs still sound fast and exciting with excellent handling of vocals.

Overall this is a cute, capable, well-priced system, but rivals here do sound larger ■

HCC VERDICT

★★★★★

KEF Egg Wireless Digital Music System
→ £350 → uk.kef.com

Naim Mu-so Qb

A box of tricks from the music-minded brand that's worth the high ticket

ONLY TWO PRODUCTS in and we've teared up the rulebook. Okay, Naim's Mu-So Qb is a single-chassis unit, but with the aid of some DSP functionality, it's designed to sound like a convincing stereo source.

Multiple drivers are employed – two tweeters and mid-range pairings, plus a single sub bolstered by dual passive bass radiators, rather than a port – with each active unit matched to its own Class D amp. A total power of 300W is claimed.

As well as an optical input and aptX Bluetooth, the Mu-so Qb offers UPnP streaming, native Tidal and Spotify support, AirPlay, an analogue input and the ability to communicate with other Naim streaming products. Also standing in its favour is the look-at-me aesthetic, aided by some lovely touches like the massive top-mounted rotary volume and excellent overall build.

The only minor black mark against all this slickness is that there's no remote supplied



as standard; you're reliant instead on a smartphone app. The app is fine, but using it isn't as fast as simply aiming a zapper.

In use, the Naim sounds big, powerful and confident. It might be using trickery to create

Standard finish is black – this grille costs an extra £50

stereo width but it's convincing. There's also real crunch and impact to *Pacific Rim* and the Mu-So manages to unpick the soundtrack layers and relay them with clarity. With *American Horror Story*, the singular nature of the Naim is more apparent, though, as it doesn't spread effects quite so effectively as the two-speaker systems. Wild Beasts' *Alpha Female*, however, is top notch with a wicked punch and rhythmic energy to the music that is beyond the scope of the others here.

A delightful performance then, and easily worth the asking price when design and connections are factored in. The single-box build may be a deciding factor ■

HCC VERDICT ★★★★★

Naim Mu-so Qb
→ £600 → www.naimaudio.com

WWW.QACOUSTICS.CO.UK/£280

Q Acoustics BT3

These offer a brilliant balance between performance and price

THESE SPEAKERS HAVE been around for a couple of years but haven't yet been put out to pasture. Instead, they've had a welcome price cut, which makes them the least expensive option here – although there are few obvious clues from a specification

perspective. As well as optical and Bluetooth connections, you get two analogue stereo inputs – one on a 3.5mm connection, one on a phono input – and a subwoofer output, with Q Acoustics also seeing fit to supply a remote. The gloss finish (red, white or black) is attractive and the cabinet feels solid. Design is, perhaps, a little square.

One enclosure contains a 50W amplifier, and sends a signal on to its passive partner via speaker cable. Both feature a 1in tweeter and a 4in midbass driver.

The BT3s aren't significantly taller than the KEF Eggs but thanks in part to the larger overall cabinet volume manage to handle *Pacific Rim* with a much greater sense of bass

extension and sheer power. Furthermore, they retain an impressive sense of control and midband smoothness without losing the underlying fury. Voices are well defined and tonally believable.

Performance with broadcast TV material is no less assured. These create enough space and presence to add real menace to *American Horror Story* with excellent effects placement and great detail retrieval. Music is also a strong point – while this system has to take second fiddle to the Naim option for sheer musical involvement, is crafts a dynamic and entertaining performance.

When you consider the bargain asking price, Q Acoustics' BT3 package has to be considered a bit of a star ■



One speaker packs amp and inputs

HCC VERDICT ★★★★★

Q Acoustics BT3
→ £280 → www.qacoustics.co.uk

Yamaha NX-N500

These multiroom-ready speakers may look a bit old school, but they're dripping with features

YAMAHA'S NX-N500 WIRELESS active speakers are part of its MusicCast multiroom range, which also includes its 'sound projector' models, soundbars and AV receivers. Each cabinet uses a 1in tweeter (with a 25W amp) and 5in midbass driver (45W). Inputs are on one speaker with a chord connecting to the other, but both need power.

These are very well equipped for your modern music/movie needs. Hookups include optical digital audio, Bluetooth, USB, hi-res network streaming, 'net radio, native Spotify support and an analogue input via a 3.5mm port. As MusicCast kit, the NX-N500s are capable of linking with numerous other Yamaha products, sharing sources and performing general multiroom wizardry.

The speakers feel extremely solid but the pro monitor-derived appearance seems a little rough and ready in its black crackle finish compared to the others – although a white version is also an option.



The NX-N500s have the size and range to draw a grin from *Pacific Rim*'s raucous action sequences. Dialogue is easy to follow and there's a great sense of depth to the performance. This depth and space also works well with *American Horror Story*'s

The NX-N500s offer DLNA streaming

brooding drama and soundscapes. It's a tidy presentation.

Where the speakers fall a little short is in power and excitement. Despite their relative size, the NX-N500s don't feel terribly beefy and with my Wild Beasts music selection, while there's obviously a smooth, refined nature to the sound it's a little lacking in the impact and timing needed to make this four-piece sing.

The features and flexibility of this system is hard to fault, but it doesn't quite convince as an all-rounder ■

HCC VERDICT



Yamaha NX-N500

→ £600 → uk.yamaha.com

Final standings

NONE OF THE models here fail to impress in some way, and all have a stereo performance that's superior to most soundbar rivals. There are, however, points of difference that make it possible to rank them in order.

Yamaha's £600 NX-N500s and KEF's £350 Egg Wireless Digital Music System feel like the more limited products. The latter has fairly meagre connectivity and as the smallest speaker here can't generate the scale of its competitors, although it looks superb and the Uni-Q driver array extracts huge amounts of detail. Yamaha's pricier option feels oddly lacking in oomph despite its size, while the styling might not suit all rooms. However, its feature set is deeply impressive and its MusicCast functionality will make it an obvious audition to those already invested in Yamaha's multiroom ecosystem.

Head to head

Choosing between the other two products is hard. Naim's Mu-So Qb is well equipped,

beautifully finished and extremely entertaining to listen to. It clearly has more power and is the best device for music playback. At £600, it is twice the price of Q Acoustics' BT3, though.

The BT3 bookshelf models aren't the slickest design and in terms of bonus features they fall short of the Yamaha and Naim

systems. But on the positive side, they offer a great balance of excitement, detail and refinement, while generating the effortless stereo width that a two-speaker solution should. In terms of bang for buck, the BT3s equal or better everything else here. For that reason, they grab first place ■



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THIS ISSUE WE'VE teamed up with British sound specialist Orbitsound to give away two BAR A60 soundbars, worth £400 each. This newly-released BAR, available exclusively through Currys PC World, brings the brand's innovative airSOUND™ technology to a sleek enclosure and promises real home cinema thrills. Enter our competition to be in with a chance of winning one.

A flatscreen's best friend

The Orbitsound BAR A60 is designed to partner a flatscreen TV and bring quality sound performance to match the hi-def visuals. Its compact dimensions, engineered wood and metal grille design make it a good fit for any living space. Fixings are supplied should you want to mount the soundbar to your wall for a clutter-free installation.

Key to the Orbitsound's performance is the use of the company's airSOUND speaker technology, also found in its other soundbar, soundbase and portable speaker products. Unlike traditional stereo, airSOUND does not limit the best listening experience to a sweet spot.

The soundbar uses four drivers – two front-facing and two side-firing speakers – with the latter fed spatial information derived from the main soundtrack, resulting in a widely dispersed soundstage with clear imaging.

Joining the soundbar is an active subwoofer that connects wirelessly via low-latency Bluetooth to ensure a tight, rhythmic bass performance. Total power output of the package is rated at 300W.

In terms of connectivity, the BAR A60 offers aptX Bluetooth hookup for streaming your music collection from your smartphone, tablet and laptop/PC. An optical digital audio input provides a simple link to your TV, while an additional 3.5mm audio jack can be used for external sources.

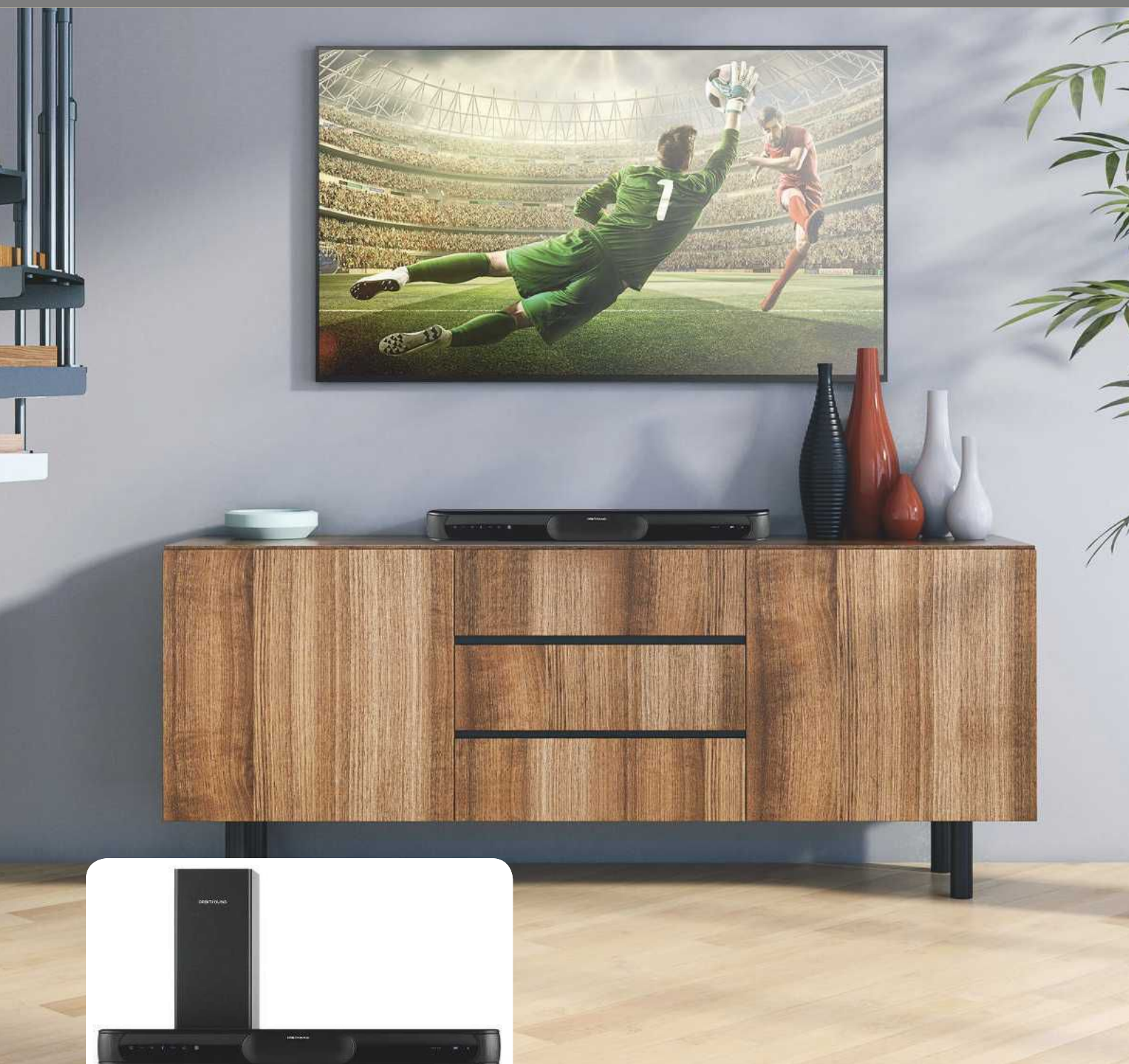
Ease-of-use features include NFC pairing with compatible devices and a TV learning remote function that enables your telly's handset to adjust the BAR A60's volume. Bass and treble tweaks can be activated via the soundbar's touchpanel controls.

Fancy adding an Orbitsound BAR A60 to your setup? Answer the question opposite correctly and you could. Good luck! ■



The BAR A60 ships with a wireless subwoofer and employs Orbitsound's bespoke airSOUND speaker technology

For more info on Orbitsound's range of soundbars, soundbases and speakers visit www.orbitsound.com



Be in with a chance of winning one of two OrbitSound BAR A60 soundbars by answering the following film-related question:

Q: Which actress starred in earth orbit thriller Gravity in 2013?

A) JENNIFER LAWRENCE B) NICOLE KIDMAN C) SANDRA BULLOCK

HOW TO ENTER: Simply email your answer (either A, B or C) to competitions@homecinemachoice.com with the subject line 'Orbitsound'. You must include your name, address and contact telephone number.

THE CLOSING DATE for this competition is December 1, 2016. Please read the terms and conditions (opposite) before sending in your entry.

Competition rules

1. The first entries drawn at random will win the prizes. **2.** Only one entry per person/household; multiple entries will be discarded. **3.** Entrants from the UK only. **4.** Employees of MyTimeMedia Ltd and companies supplying competition prizes are not eligible to enter this competition. **5.** Please ensure your personal details are correct, as they will be used to contact you if you win. **6.** No alternatives, cash or otherwise, will be offered to the winners as prizes. **7.** The editor's decision is final. **8.** Comp winners' info available upon request. **9.** The closing date for entries is December 1, 2016.



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An Ultra HD Blu-ray player announcement causes **Mark Craven** to wonder why the AV essentials are cheaper in the US, and whether he should watch a low-budget *Mad Max* rip-off

SECONDS AFTER I announced on our Facebook page that Oppo's 4K Blu-ray player would most likely sell for £599, a couple of readers responded to say it was over-priced, particularly because the rumoured US ticket would be \$499.

This took me somewhat by surprise, as £599 was pretty much what I had assumed it would sell for, considering Panasonic's 4K deck is on shelves for the same. But it's easy to see why our Stateside cousins enjoying a cheaper price sticks in the craw – especially as it's not the first time this sort of thing has happened in the AV world.

Certainly, the differences between Oppo's direct sales model in the US, and its dealer model in the UK where retailer margins have to be factored in, will account for much of that difference. Maybe sales tax, too. But, during a time where the value of the pound has been falling, it still looks like a bargain that we're missing out on.

The pricing of AV gear is no doubt a complicated business. Brand X wants to make as much money as possible from its new widget, but doesn't want to make it hard to sell. On the other hand, brands aiming for a low price are aware that they can't end up with a product that's inferior to what purchasers will expect.

On top of this there are market considerations. Got a competitor in your sights? Price accordingly, either to make your new device appear as a like-for-like rival, or just that smidgeon more affordable to appear better value. But go too low and you'll fall off buyers' radars altogether.

So: when is something overpriced? That's impossible to say. One person's 'expensive' is another person's 'affordable', after all. I'm sure there are super-yacht owners who think their £30m water wagon is a *bona fide* steal.

Perhaps it's easier when there are equivalent products around to compare too – three-way floorstanders, for instance. Well, to an extent, yes. But how much value should be placed on aesthetics or build quality? Again, it will come to down to personal opinion.

The bottom line is that if you think something is over-priced, then it is. Tell the brand where to go by not buying it. If enough people follow your lead, the manufacturer will end up with excess stock and may go back to its calculator. This is why so many flatscreens, always a competitive market, have their tickets slashed a few months into their lifespan.

Blu-ray bafflement

Personally, though, I'm less baffled by wayward hardware than I am software. It's with Blu-rays that UK AV-hedz suffer. Wanna buy the Ultra HD platter of *Mad Max: Fury Road*? That'll be £20. Across the Pond? \$20.

And in this instance, you're kinda out of options. **There isn't really a cheaper, rival version of *Mad Max: Fury Road* that you can get your hands on** that still stars Tom Hardy and Charlize Theron and has the same outstanding action (there is *The Asylum's* knock-off effort *Road Wars*, which I'm sure is absolutely awful). You could take a stand and not buy it, but then you'll miss out on the bit with the guitar-playing guy and the dudes on the pole vaults. You have to own it!

So why are BDs more expensive over here than in the US? Who knows. I'm sure there's an argument around replication costs, distribution, BBFC certification and everything else, but I'm too mad to think about it ■

*Do you wait for price drops before purchasing new kit?
Let us know: email letters@homecinemachoice.com*

Mark Craven is counting down the days until the Black Friday sales, when it takes two hours just to pick up a pint of milk at ASDA





Film Fanatic

The pumpkins have been carved and the spirits are getting restless, so it must be time for **Anton van Beek** to seek some devilish delights from newly-released fright flicks

WHILE THIS ISSUE of *Home Cinema Choice* sports a December 2016 cover date, the arcane and unknowable nature of publishing means that it's actually the one that goes on sale at the tail-end of October [*it's because we have 13 issues a year – Ed*]. And, guys and ghouls, this makes it time for a trawl through some of the Blu-rays and DVDs that have been unleashed in time for Halloween.

Last year (with mixed results) I focused exclusively on the sort of schlock that you've never heard of yet finds its way into supermarket racks as soon as the leaves start falling off the trees. This year I've aimed a little higher. A little.

First up is Stephen King's *Cell* (Signature Entertainment, all-region Blu-ray). Based on the bestselling horror author's 2006 novel of the same name, *Cell* is essentially King's attempt at a zombie story, only here people are turned into mindless murderers by a mysterious signal transmitted over the global telecommunications network.

Maybe a better title would have been *Phonepocalypse Now*. Even then, it would still be a terrible film. I can only assume that bringing John Cusack and Samuel L. Jackson to the cast drained most of the available cash, as the movie simply doesn't have the budget to do King's concept any real justice. **Instead of a nightmarish apocalypse you end up watching a dull trudge around some forests.**

It also doesn't help that the script is clunky and that the lead actors are more glassy-eyed and lifeless than the zombies. Pass on this one, people.

Far more entertaining is the goofy 1973 British fright flick *Psychomania*, recently resurrected in hi-def as part of the BFI's Flipside imprint (BFI, Region B Blu-ray). For those who have yet to savour its particular brand of madness, it follows the leader

of teen motorbike gang who convinces his frog-worshipping occultist mother (Beryl Reid) to teach him the secret of immortality. Before long, gang members are killing themselves in various creative ways and then returning from the dead to terrorise the stiff and squares all over again. Completely bonkers, but also a lot of fun. And the BFI's release features a new 2K restoration plus a host of extras.

Also worth a re-visit is the 1988 creature-feature *Slugs* (Arrow Video, Region A/B BD). Based on Shaun Hutson's breakout novel about killer gastropods, *Slugs* is not what anybody would call a 'good' film. However, the combination of dreadful acting (much of it dubbed), pulpy subject matter and lashings of gore make this a treat for lovers of trashy horror. And it doesn't hurt that Arrow has put together a typically thorough set of bonus features.

Short but sweet?

Finishing things off is a double-header of anthology films, a staple of the genre. Unfortunately, despite the presence of a freaky Easter Bunny in one of its holiday-themed horror shorts, *Holidays* (Kaleidoscope, R2 DVD) just doesn't work, with almost every story feeling underdeveloped. More successful is *Tales of Halloween* (Arrow Films, Region B BD), which boasts a line-up of directors who will be familiar to most horror fans, including Darren Lynn Bousman (*Saw II/III/IV*), Lucky McKee (*The Woods*) and Neil Marshall (*The Descent*). This 10-strong collection of Halloween-themed shorts delivers all on fronts, and the Blu-ray also rounds up six extra exclusive mini-movies by the same filmmakers.

And if none of these float your boat, then check out our selection of ghost movies on p108! ■

Do you have a favourite horror film you re-watch every Halloween? Let us know: email letters@homecinemachoice.com

Ironically, October 31st is the one night of the year when **Anton van Beek** does not watch any horror films. He prefers a good rom-com instead



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In The Mix

Dolby Vision may be practically invisible for consumers, yet **Jon Thompson** believes it's the best path forward for HDR, and that a stealth approach is laying the foundations for a revolution

ON THE FACE of it, Dolby Vision (DV) seems to be struggling to make it to market. Only one major global TV manufacturer supports the format at the moment and there's a very limited amount of consumer content available. Why is it finding it so hard to achieve prime-time?

I've been tracking DV since its creation, when Dolby bought the Canadian company Brightside Technologies in 2007. Brightside had developed an LCD screen that used individually modulated LED semi-conductors as backlights. Each LED had 256 steps, giving it a peak brightness of 4,000 cd/m² (or nits). Most HDR TVs today only achieve 1,000 nits, with most OLEDs struggling to reach 700 nits. Brightside and Dolby were way ahead ten years ago.

Dolby invited me to a demo of this at the time, and despite thinking 4,000 nits seemed far too bright in a dark room, the image looked 3D even though it was a 2D display. I could see then that HDR would be the next big thing.

Doors of perception

Key to DV is a PQ (perceptual quantizer) coding system developed by Dolby as a new electro-optical transfer function for coding the entire nit range (up to 10,000) within 12 bits without introducing artefacts. This was then formalised as SMPTE ST-2084.

Now, HDR 10 uses SMPTE ST-2084, too – the issue is that it was never really designed to work in 10-bit. I can see artefacts in HDR 10. To me, this is a problem, and a reason why DV should have been included as a mandatory standard in Ultra HD Blu-ray. The use of HDR 10 has been poorly implemented with incorrect metadata to feed the tone mapping engine that all HDR TVs use. Accurate tone mapping is needed to avoid the image clipping in areas of peak brightness. This is not an issue with

Dolby Vision as its metadata is locked into the film on a frame-by-frame basis.

All Dolby Vision devices support HDR 10 and the Hybrid Gamma Log format (due to the chipsets supporting all three formats by default, it seems), so you have backwards compatibility. With this in mind, **I'm hoping HDR 10 will just disappear as quickly as it arrived.** All the tests proved it that if you were doing HDR PQ encoding you needed 12-bits for high brightness so banding is not visible. So what do manufacturers do? Go for the cheapest option, and implement licence-free HDR 10.

HDR 10 and Dolby Vision derive from the same source, so it is interesting to see how the two formats handle identical content. *Pan* (pictured) is a film used a lot for demos, and I've actually seen the original source as a friend of mine supervised the pictures on this movie. In an HDR 10/DV face off, it's the latter that looks very close to the source.

So Dolby Vision is great, but not ubiquitous. Why? Well, I've worked with all the major studios and there's a love-hate relationship with Dolby; they love what Dolby does but resent having to pay for it. Which seems to be an issue in the world today – no one wants to pay for or respect the cost of doing something well. Dolby is now using the stealth approach; appearing in major chipsets used in consumer video is a way of being in a product even if you didn't know it was there. The next Android OS (7.0 Nougat) supports DV by default, for example.

Most likely, in the next 12 months when you buy a new UHD Blu-ray player, streaming device or TV, it will be Dolby Vision capable. Whether it's enabled or not is another question. The tech is ready for prime-time, we just need people to pay up for it ■

*Have you bought a Dolby Vision-enabled TV?
Let us know: email letters@homecinemachoice.com*

When he's not in his screening room, **Jon Thompson** tweets about Hollywood gossip, movie-making and digital mastering at [@johnnyfocal](https://twitter.com/johnnyfocal)



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VHS

GONE BUT NOT FORGOTTEN



This year, the last VHS VCR rolled off the production line. **Martin Pipe** charts the history of a technology that straddled the analogue and digital switch during a 40-year lifespan

A Sony Trinitron TV and Ferguson VCR – there was a time when your AV setup might have looked like this

FORTY YEARS AGO home cinema meant one of two things. Either a movie you wanted to see just happened to fit in with the schedules of the three TV broadcasters operating in the UK, or you had a Super 8 [see HCC #265] or 16mm film projector.

But changes were on the way. Broadcasters had for many years been using video tape recorders – VTRs, enormous and frighteningly expensive contraptions, then using a reel-to-reel format known as quadruplex – during production. Videotape, unlike film, needed no processing, and because the tape contained both sound and pictures there was less chance of lip-sync errors. Immediacy and programme distribution potential were also draws – a tape containing a programme that might have been edited within the hour could be cued up in the

playlist suite, ready for broadcast at the touch of a button.

By the 1960s, much cheaper 'helical-scan' reel-to-reel VTRs had arrived. With an optional TV tuner, these black-and-white wonders could record programmes off-air. Plug in a camera and making your own content became a possibility, too. But, as with audio reel-to-reel machines, they weren't really convenient enough for home use. The tape had to be manually laced through the transport. If you weren't careful you'd get things wrong or cause damage. Only a few brave enthusiasts with deep pockets invested.

What was needed was a video version of the increasingly popular audio cassette. And that's where the VHS story begins...

FIRST, IN 1971, there was the colour-capable U-Matic video cassette recorder (VCR) from Sony, a forerunner to its Betamax format a few years later. Here, the tape was wrapped around a rotating drum where it was scanned by a pair of heads, in the process reading or writing closely spaced diagonal tracks containing the video info.

The large U-Matic cassette only had an hour's running time – too short for a typical movie – and was expensive. It was reliable, though, capable of good performance and catering for two channels of audio from the outset. But despite models with timers and TV tuners for scheduled recordings, it failed to take off domestically, finding more favour with businesses and, in particular, the broadcasting industry.

One of the other early tape systems came from Philips. Its 'VCR' format N1500 deck appeared in European shops in 1972, finding its way over here two years later. As with the majority of home video formats that were to come, the tape within the cassettes was half an inch wide; in contrast, U-Matic tape had a width of 3/4in.

The colour-capable N1500 was aimed squarely at the home user, with its six-channel TV tuner and a single-shot timer built around a quaint mechanical clock. Sound was mono, but British stereo TV was still some twenty years distant at that time. Few if any pre-recorded tapes were available; this machine was all about timeshifting TV shows. Connection was a bit different to what we're used to, with the recorder hooking up between the TV aerial and the TV, as no domestic TVs had direct AV inputs back then.

Picture performance was so good it was often difficult to distinguish between a recording and live transmission. But there were caveats. Sometimes, the sync circuitry of a TV had to be modified by a dealer so it could accommodate the less-than broadcast-spec signals of a VCR. Failure to deal with this, and pictures 'wobbled'.

The unusual Philips cassettes, where two tape reels were stacked vertically rather than side-by-side, ran for an hour (or less). These blocky objects contained a somewhat abrasive recording tape, and as a result only 500 hours of use was expected before an overhaul (including replacement of the video head drum) was suggested. Furthermore, the machines were expensive – around £5,000 in today's money. A more affordable (but not backwards-compatible) version known as VCR-LP launched in 1978, offering a recording time of two-and-a-half hours and improved head life. But by then it was too late. Other formats were on the way.

One was Sony's Betamax, making its debut in 1975 – although British viewers had to wait until 1978 for a version optimised for PAL TV. The format gained rapid success in the US, and for a while the brand was synonymous with videotape (as 'Hoover' was with 'vacuum cleaner'). The cassette was about the same size as a paperback book, and the playback machine was reliable and easy to use.

When the format was originally launched in NTSC territories, the tape only ran for an hour. Yet using newer techniques, similar to those employed by Philips, running times doubled so that when Betamax arrived in Blighty, a single tape (an 'L750')



VHS tapes, and their bulky boxes, meant collectors needed plenty of shelf space

could contain three-and-a-quarter hours of content. The first UK machine, Sony's SL-8000, was a robust beast, with an eight-channel TV tuner and single-event timer associated with a digital clock. Picture quality was more than acceptable, but owing to the slow linear tape speed audio was somewhat hissy.

Other manufacturers opting to produce Betamax machines included NEC, Toshiba and Sanyo. But a rival – and eventual format champion – shortly arrived from Japan.

VHS, AN ACRONYM for Video Helical Scan

(not Video Home System as is sometimes thought), received its launch in October 1976 – the culmination of five years work by JVC engineers Yuma Shiraishi and Shizuo Takano. The company had also made U-Matic machines, and was asked by Sony to consider licensing Betamax, but JVC felt its own format was the way to go.

The E-prefixed VHS cassettes were larger than their Betamax competitors, and could contain more tape. Recording times could therefore be longer – two hours was the original development goal. The linear tape speed was higher than that of Betamax, improving sound quality. The tape path was also different. With Betamax, tape was 'laced up' as long as it was in the machine. Rewind and fast-forward operations took a long time, and there was a penalty to be paid in terms of wear. VHS tapes, on the other hand, only laced up during record and play, meaning there was less stress on the tape and mechanism during fast-spooling.

VHS was adopted by Panasonic (also owned by JVC parent Matsushita), Akai, Mitsubishi, Sharp and Hitachi. Meanwhile, Philips did its own thing and introduced a technically sophisticated format, V2000, that boasted innovative features such as 'flip-over' recording and noiseless freeze-frames and picture search.

A three-way format war, then? Not quite. It quickly became a two-horse race, with V2000 dropping out and completely dead by 1986. And – as we all know – VHS won the war, with Sony adopting the tech in 1988 (although production of blank Betamax tapes only ceased last year).

So why did VHS triumph? In the late 1970s, it was common to rent TVs as opposed to buying them. Naturally, the rental chains – firms like Visionhire, Granada and Radio Rentals – wanted to offer video, too, and they considered VHS the format to back. It certainly helped that Thorn Consumer Electronics – the parent of UK brand Ferguson – already had a relationship with JVC. Ferguson TVs were stocked by most rental chains, and it made sense to sell Ferguson-branded VCRs. Enter the Ferguson Videostar range, consisting of badge-engineered JVC VHS machines. The first, the 3292, was basically a PAL version of the very first VHS VCR – JVC's 1976 HR3300 Vidstar. The machines looked identical, save for different programme selectors. Both decks had mechanical piano-key transport controls, common to all VCRs of the pre-microprocessor age.

Other JVC machines bore logos familiar to those who rented their TVs, with Radio Rentals, for example, using Baird and R.R.C. Meanwhile,

Sony's C7 Betamax recorder. Don't ask it to cook breakfast...



VHS: AV's naughty boy

Remembering video nasties

In the early years of VHS, there was no certification or regulation specific to video cassettes. Films rejected for cinemas by censors could be legally distributed on tape.



One title, *Cannibal Holocaust* (now available on Blu-ray, left), was particularly notorious, and in

1982, a VHS copy of this Italian splatter was posted to Mary Whitehouse by distributor Go Video, in an attempt to create publicity through controversy. This proved to be a spectacular misfire for the horror industry, as Whitehouse became a prominent campaigner against 'video nasties', joined by the UK tabloid press.

The result was the Video Recordings Act 1984, which required all material supplied on videotape to be subjected to an age-rated system. Many will remember Radio 1 DJ Simon Bates explaining the ratings ('Whenever you buy or rent a video...') before watching the movie you'd just paid for.

Following the act, the British Board of Film Censors, which became the British Board of Film Classification, could impose cuts as a condition of certification being granted. And selling or hiring works that had been refused classification – uncut nasties, for example – became a crime. Oddly, though, in 2009 after the demise of VHS as a distribution medium it was discovered that the Video Recordings Act 1984 was unenforceable under EU law due to a 'technicality' – it was repealed, and subsequently revived as the 2010 Video Recordings Act. Although by this time, many of those video nasties had been recertified '18'.

Rental outfit Granada stocked its own badged VCRs; JVC, the originator of VHS, sold players across four decades

Granada applied its name to the Hitachi VHS VCRs it had bought in for rental. The upshot of all this was that VHS became ubiquitous, buoyed by the economy of monthly rental.

Although the electronics in a PAL machine differed from those in an NTSC device, the mechanics were largely identical. This helped to cement VHS's long-term success worldwide, spurring JVC and other licensees to develop newer and more feature-laden machines. By 1980, a 70 per cent global market share was being claimed, and we saw the sophisticated JVC HR7700 – also sold as the Ferguson Videostar 3V23. This was barely recognisable from the clunky 3292, with a front-loading transport, soft-touch buttons, remote control, electronic displays, socket for a video camera, trick-play facilities (slow-mo, search, double-speed play and still-frame) and even Dolby noise reduction to counter audio hiss. And as rental chains responded to their customers' desires to keep up with the tech, older stock was sold off at ever lower prices.

HOME VIDEO WAS sold as a means of mastering TV schedules. Movie studios, perhaps viewing it as a threat to cinema tills, were surprisingly slow to catch on to its potential. Among the titles you could obtain in late 1980 – usually between £20 and £40 a time – were *The 39 Steps*, *Porridge*, *M*A*S*H* and *The Eagle Has Landed*. All came at least three years after their theatrical run, or were minor successes. Blockbusters like *Star Wars*, *The Spy Who Loved Me*, *Grease* and *Close Encounters of the Third Kind* were not yet available. As far as pre-recorded entertainment went, early VCR owners had to make do with music and concert films, documentaries, pornography (a key driver in video's early phase) and the low-budget horror schlock that was to become notorious as 'video nasties' [see box, left].

Yet by the mid-80s the potential of videocassettes as a moneyspinner was at last recognised by Hollywood and broadcasters with extensive archives. More material and cheaper VCRs led to an explosion of local video shops, ranging from stands stocked with blockbuster movies in newsagents to dedicated



Peeking inside the Ferguson Videostar 3V23, launched in 1980

stores. Big business, notably the US Blockbuster chain, muscled in on the act. Eventually, though, sell-through video contributed to the slow demise of rental, the cost of a movie on VHS coming down to a tenner. Piracy didn't help the business, either. Tapes, either derived from dodgy cinema projectionists running off copies of current films or duplicates of rentals crafted via the simple task of connecting the AV outputs of one video recorder to the inputs of another, birthed a bootleg scene. These were usually dreadful quality, joined by photocopied cover art and amateurish labelling. To combat it, the video industry embarked on an anti-piracy campaign, embossed tapes with holographic stickers, embraced 'anti-copy' systems like Macrovision and used the full force of the law to come down on pirates.

Many AV-Holics moved away from VHS relatively early in the format's life. LaserDisc and DVD became natural successors. Yet it persevered in terms of software longer than you may remember, actually overlapping the dawn of Blu-ray with tapes still

released as recently as 2006. Which explains why many of us still have VHS collections in the attic.

BUT ALL OF this was in the future. The 1980s were an exciting time for video, rather than the more depressing era of its long, drawn-out death, with technology developments



improving the machines rapidly, adding features and boosting performance.

Timeshifters rejoiced as the two-hour E-120 cassette was joined by a three-hour E-180 version, with four- and five-hour tapes to follow. A smaller version of VHS with a maximum running time of 45 minutes, known as VHS-C, was also introduced for home-movie makers in 1982 and led to the development of take-anywhere camcorders. And in 1983 a long-play facility doubled VHS tape capacity. Economical, yes, but you paid the price with a deterioration in sound quality, and pictures taking on a plasticky sheen and swimming in noise.

Later that year came hi-fi sound, first on Panasonic's £600 NV-850 VHS machine. You could now route audio from your VCR to your audio system without being embarrassed (previous stereo machines simply divided up the existing mono edgetrack into two of just under half the width, with a corresponding increase in dropouts and hiss). By the end of the decade, decoders for Nicam broadcast stereo TV were incorporated into upmarket VCRs, and manufacturers like Yamaha and Marantz began selling Dolby Surround decoders that could craft multichannel audio from VHS tapes. Watching movies at home would never be the same again...

Other developments focused on image quality. In 1986, VHS 'HQ' made backwards-compatible tweaks to improve picture quality, and the following year Super VHS (S-VHS) was launched. Although there was no change in chrominance (colour) performance, the luminance (greyscale) signal was here upped in resolution from around 260 lines to 400 or so. The result was an improvement in the amount of detail that could be captured, revolutionising high-end home-movie making. However, no movies were released in this form. – by this time enthusiasts were being shunted towards LaserDisc.

At the lower end of the market, meanwhile, CRT TVs with in-built VCRs (marketed by Amstrad as Televideo) sold like hot cakes. Alan Sugar's operation also sold a 'double-decker' VCR that enabled copies of tapes to be made. Software providers took a dim view.

Ease of use was also overhauled by advances in tech. Thanks to barcode scanners, VideoPlus codes, satellite receiver control and onscreen menu displays, programming a VCR timer was no longer an end-of-the-pier joke. Enthusiasts also enjoyed editing terminals, timecode support, jog-shuttle dials for accurate tape manipulation and timebase correctors to ensure picture stability. Even expensive multi-standard VCRs arrived, which could cope with the various scanning frequencies and colour-encoding standards (NTSC, PAL, SECAM) used around the world, although they needed to be partnered with an equally pricey multi-standard TV. Panasonic's 1989 player that could convert NTSC into a 'pseudo-PAL' form was a better bet.

THE DIGITAL ERA would obviously take the wind out of VHS's analogue sails, yet digital technology found a home in VHS territory. Noise-reduction was added to higher-end machines, cleaning up pictures



Blockbuster, once the giant of the UK's video rental market, went into administration in 2013

from analogue tapes with surprising effectiveness, and in 2000 a digital version of the format – D-VHS – surfaced. Using MPEG-2 compression, as found in new products like digital TV and DVD, it was a revelation in image quality terms. Several hours of near broadcast-quality recording was possible from D-VHS tapes, and hardware was backwards compatible with VHS and S-VHS media. And it was this format that saw VHS go hi-def, with support for 720p and 1080i content. The players were only 'officially' distributed in the US and Japan, but some – usually bundled with pre-recorded tapes or recordings made from hi-def US movie channels – found their way to the UK. For a while, D-VHS imports from across the Atlantic gave UK home cinema freaks their only means of putting a new hi-def TV or projector through its paces.

This unexpected digital, HD makeover was a last hurrah, though. The VHS story was drawing to a close. Consumers bought DVDs rather than VHS tapes, while recording telly to DVD and HDD recorders. The latter in particular proved their worth in terms of user-friendliness while turning in a far better AV performance.

And this July, Japanese firm Funai – the last manufacturer of VHS hardware, usually for other brands – announced its decision to cease production by the end of the month. This came despite Funai selling 750,000 VHS-compatible products last year, hinting at a community still in love with its tapes. The format may now be officially dead, but with millions of VHS tapes still in existence talk of a vinyl-like revival persists. Unlike vinyl, however, VHS doesn't have quality on its side...

TO PUT VHS into some sort of 2016 context, I gathered together multiple versions of sci-fi horror classic *Predator* – and the machines to play them on. The movie was released in 1987 when home video ruled. With Arnie flexing his muscles, John McTiernan's skilful direction and Alan Silvestri's superb score, it still stands the test of time today. Might the same apply to good ol' analogue VHS?

Versions of the movie collected were the 4:3 pan-and-scan VHS tape, letterbox LaserDisc, the

similarly formatted DVD and the anamorphic Blu-ray release. Machines at my disposal included a 1980-vintage Ferguson Videostar 3V22 VCR, a JVC HR-S7965 S-VHS ET deck (from the opposite end of the format's life), a classic Pioneer CLD-2950 LaserDisc player and a Cambridge Audio BD spinner. The TVs used were a Sony KV1400 (an iconic 1979 14in Trinitron colour portable) and a 40in Samsung Full HD set, built 30 years later.

Viewing *Predator* on a typical early-1980s home rig, comprising the 3V22 and KV1400, is an odd experience. It's a credit to the Japanese consumer electronics industry that – nearly 40 years on – these two pieces of equipment still function. Performance isn't great though. There's a fair amount of picture grain, even with the tracking knob rotated to its optimum position. Saturated colours are a little excessive, some bleed is visible and there are regular dropouts – black-and-white flecks, caused by head-to-tape contact imperfections. Even through the TV's speaker, tape-hiss is evident during quiet sequences. Furthermore, there's pitch instability, which can be heard most obviously in the strings of Silvestri's score. The picture is stable, though...

Usability is laughably poor, too. VHS doesn't give you the near-instantaneous chapter selection of the disc formats. To make things worse, the 3V22 lacks video search, meaning that you have to stop and rewind if you want to catch something you've missed. And on this machine, pressing pause doesn't give that most basic of functions – freeze-frame. But for all its limitations the concept of watching what you wanted, at a time that suited you, must have been exciting back in the 1980s.

Hooking up the 3V22 to the Samsung TV via composite video (I had to knock up a lead with a 'screw-on' PL259 plug at one end, and a phono plug at the other...) really laid bare the limitations of both format and player. The newer display tech may offer obvious benefits, such as a lack of geometric errors, and no distortion of the picture during bright scenes, but the screen's size and higher resolution makes noise and bleed all the more obvious. In all fairness, though, VHS wasn't really designed to be viewed on a 40in telly.

The latter-day S-VHS player, however, illustrated how much the hardware progressed during VHS's lifespan. This upmarket deck has a timebase-corrector and noise-reduction facility and it shows. Pictures are much more stable, colour levels are more realistic, dropouts are less evident, and a tad more detail is visible. Perhaps most obviously, there's drastic reduction in the amount of noise, especially on areas of saturated colour (explosions and 'Predator-vision', for example). Improvements in sound were most noticeable when the machine was connected to my separates system. Stereo sound was crystal-clear, gunfire panned from one speaker to another, and the jungle ambience became better-defined. *Predator* was distributed in Dolby Stereo, and thanks to VHS hi-fi it's available here too. Engaging my AVR's Pro-Logic II mode yielded an immersive soundtrack.



With digital and hi-def formats on offer, VHS became confined to the AV dustbin

Yet although the improvement in picture relative to the Ferguson was enormous, it's still distinctly VHS – rather flat, lacking in detail and suffering from coarse colour rendition. It's certainly watchable, but an easy reminder of how far home AV has come.

As for the other formats, it's obvious why dedicated film fans moved on. As well as CD-quality PCM stereo and quick access to specific chapters, *Predator* on LaserDisc offers a picture quality that's generally far superior to that of VHS. The image is rock-solid stable, there's more detail, and the widescreen presentation means you can see more of the picture as less brutal cropping has been applied. That said, chroma noise – a slight colour patterning, for which LaserDisc was notorious – can spoil murkier scenes. Oh, and the movie spans both sides of the disc, so there's a pause in playback as the disc is flipped – an automatic process with the CLD-2950.

Good though the LaserDisc is, it pales next to digital disc. With DVD, colours have more vibrancy and little noise, dynamic range is noticeably wider and far more fine detail is evident; frankly, it knocks analogue standard-def into the proverbial cocked-hat. Of far more importance, though, is the discrete Dolby Digital 5.1 soundtrack, which scores over matrix-surround in terms of steering and placement. The Blu-ray also offers a 5.1 soundtrack but the hi-def visuals are the real draw, even if this initial release has an underwhelming MPEG-2 transfer.

20th Century Fox outed VHS and LaserDisc editions of *Deadpool* – sadly it was an April Fools' Day joke



SO WHILE VHS is now consigned to history, it's hardly likely to make a comeback. The tech, although changing massively during its 40 years, simply can't cut it in today's hi-def age. The AV world moves on, and Funai is surely justified in shuttering its production facilities, even if that leaves VHS owners out in the cold.

Despite this, I wouldn't advocate you throw your analogue hardware and tape collection away. Hoarding legacy gear and obsolete formats is all part of the home cinema hobby. And if you find yourself bored one evening, you can always try to programme your VCR to record next week's episode of *Match of the Day*... ■

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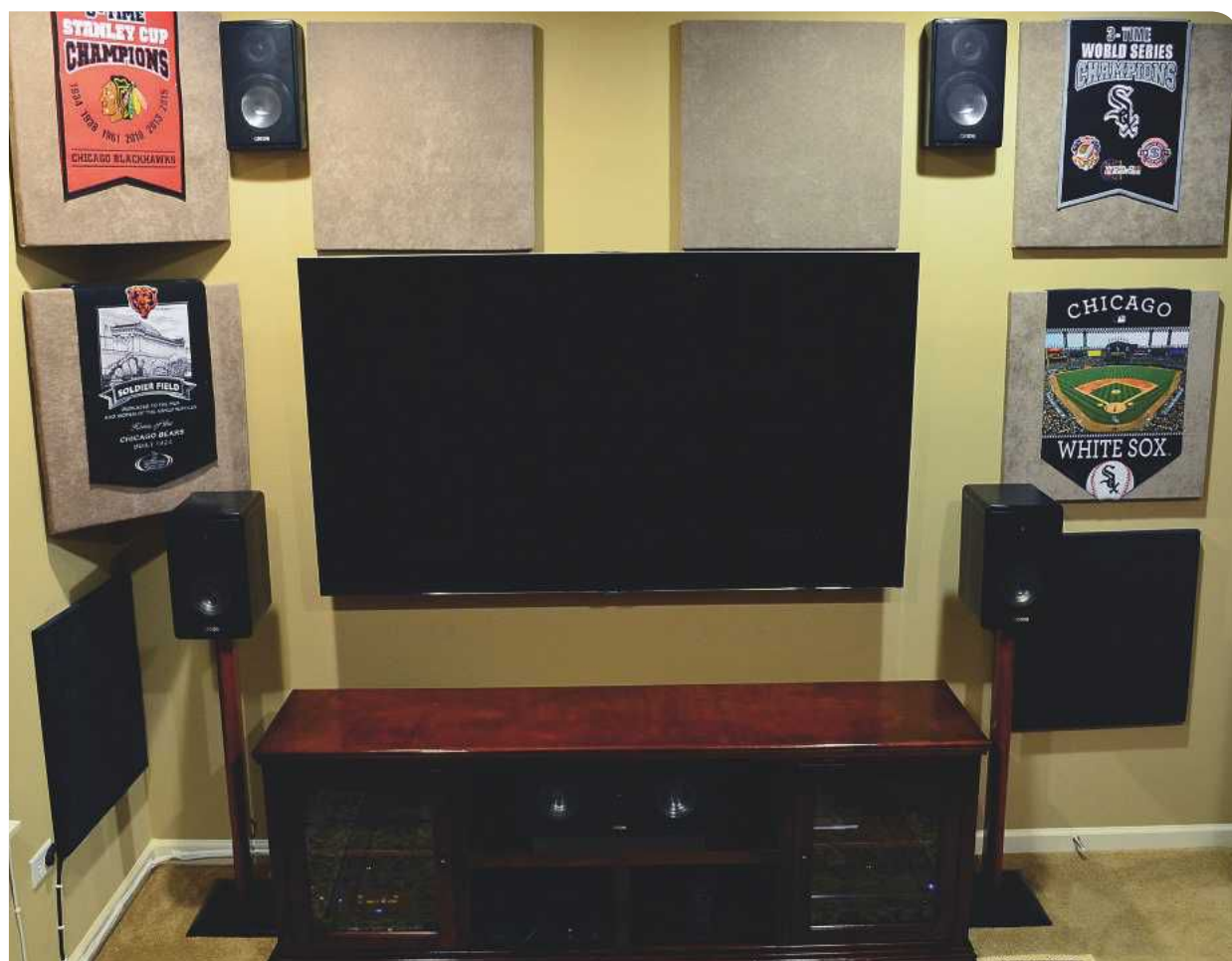
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Certified: AV-Holic!

Sports-mad US-based reader **Lovell** invites you to step inside his man cave, where his 7.1 speaker setup has expanded to 7.1.6 and the seating packs a shakin', quakin' surprise. Looks like the perfect place to watch the Super Bowl...



Welcome to the AV-Holics Hall of Fame! Introduce yourself...

Hi, my name is Lovell and I live in the Chicago metropolitan area. I'm 44 and work as an Industrial Specialist.

How long have you been into home cinema, and what was the first setup you had?

I've been into hi-fi since I was 20 and purchased a pair of Infinity SM122 floorstanding speakers powered by a JVC receiver. Those 12in woofers used to vibrate throughout the dorm!

While I've always loved the movie theatre experience, I've only been into home cinema for about six years. A big store clearance had a Yamaha 5.1 system with a separate receiver at a price that I couldn't pass up. That beginners' system was definitely better than TV speakers and I've continued to upgrade.

Before I got into home cinema my wife Donna and I used to go to the movie theatre about once a month to view the latest blockbuster. About three years ago my home

cinema surpassed the typical movie theatre experience and we stopped going. While my home cinema can't compete when it comes to screen size, my sound and screen image quality is far better than the local cinema. When a new blockbuster movie is released we start to count down until we can rent or buy it on Blu-ray!

What do you love the most about the cinema room?

It describes my interests. I'm a huge sports fan, so I created a sports theme. Being in a closed room with great surround sound and an immaculate picture really helps us enjoy the occasion. The cinema is used daily to watch TV shows, news, video games, and sports. We usually watch about two movies each week.

It's cool having a dedicated room where I can control external distractions.

Has this room always been your man-cave? Or is it a conversion of a previous space?

Our house was built three years ago. As we were selecting a builder for our home, it was important that the floor plan had a room that was not located near the bedrooms so that it could be used for a cinema. We chose to convert a 12ft by 10ft office.

The cinema shares walls with the garage, family room and laundry room. Extra insulation was added to the walls. At night I can watch movies and not disturb others that are sleeping. The blackout blind does a great job at keeping light out of the room, too.

One advantage to having a smaller room is that it takes less power to reach reference level sound. A high-end AV receiver is more than adequate. A top priority was to create the most optimal 7.1 speaker setup and listening position. Unfortunately, this resulted in the seating area being located 6.5ft from the screen and limited my screen size – the 75in TV does look huge. The room is 100 per cent D.I.Y. and we are really pleased with the results.

How much have you spent on the project?

Approximately \$16,000 over the past five years. I've tried to reduce cost by not paying retail price and searching hard for discounts.

What's in your kit rack?

The TV is a Samsung UN75F8000. The speakers (7.1.6 configuration) are six Canton Ergo 620s, four Canton Chrono 501s, two Canton Ergo 610s and an Ergo 655 centre channel – there's also a MartinLogan Dynamo 700 subwoofer, plus SoundShaker transducers/amp for the Seatcraft seating.

I have two AV receivers – a Pioneer Elite SC-79 and a Yamaha RX-V2067 – plus an Oppo BDP-93 Blu-ray player, Darbee Darblet, Direct TV and Apple TV set-top boxes and a Sony PlayStation 3. The remote control is a Harmony Elite.

How would you rate the system's performance?

8 out of 10. Overall the system has a sound balance that immerses you in the movie. The Canton bookshelf speakers have great build quality and sound awesome – the aluminium woofer and tweeter bring lots of details without sounding bright. The 700W/10in MartinLogan sub is more than enough to handle the small room.

My Samsung TV has full-array local dimming, which makes the black levels really pop, and while not 4K, the images look great in 1080p. Having height speakers helps



Each seat is fitted with a SoundShaker transducer

create a 3D listening environment and the SoundShakers add another dimension to the viewing experience.

There are always improvements to make and we are never quite done in this hobby. Adding two Canton floorstanders to the front would improve two-channel music listening.

How does the 13-channel speaker system work with the two AV receivers?

The Pioneer is used as the main receiver and the Yamaha powers the height speakers.

I purchased the Pioneer in 2013, plus two additional speakers for a 9.1 (two front heights) setup. The initial results were not satisfactory. DTS Neo:X did a great job with matrixing sound to the front heights, but it created too much emphasis upfront and detracted from the surrounds. During that time Dolby and Auro were releasing lots of information about their upcoming 3D sound formats. Four more speakers were purchased and the cinema was prepped to be 7.1.6 ready. In March 2014, I got the idea to dust off the ol' Yamaha RX-V2067 to power all six height channels and spread the DTS Neo:X front height sound across the entire ceiling.

The Pioneer has an option that allows the user to turn off the 7.1 base speakers and only hear the heights. After spending countless hours individually calibrating and tweaking the height speakers, I became extremely pleased with the results. I also spent a lot of time listening to specific Dolby Atmos scenes at local audio stores to get a better understanding of how height speakers should sound.

While not discrete, matrix upmixing is a big improvement over standard 7.1 sound and I use the six height speakers all the time for movies

and TV watching. Effects like rainfall and the crowd cheering during sports events sound awesome from above.

What's your fave bit of kit?

That changes often, but currently it's the recently purchased SoundShaker system. This feels as if several subwoofers have been added to the room, yet others in the house aren't disturbed because it's only the seats that are vibrating. Each seat has a transducer attached and they're powered by an amp with a built-in crossover (50Hz-100Hz in increments of five). There's also a level control – I set the crossover to 50Hz and the level to 6 so that the seats only vibrate during deep bass scenes and assist my 10in



Lovell's acoustic panels are decorated with team pennants



The two ceiling speakers are joined by four height channels

sub. I watched the movie *San Andreas* with some friends and saw their jaws drop when the seats started shaking during the earthquake scenes!

What's next on your kit list?

It's time for a new AV receiver. I'm watching out for a high-end (but less than \$5,000) AVR that can do all three immersive formats (Auro3D, DTS:X and Dolby Atmos), support a 7.1.6 speaker setup and include Dirac Live for room correction. I'm willing to sacrifice the later if the included room correction is adjustable, but the first two are a must.

What impact has the acoustic panelling made on the sound?

The goal was to maximize direct sound while reducing reflections. I have 21 acoustic absorption panels, eight bass traps and

a subwoofer isolation pad. Sound clarity improved moderately after installing the sound panels, with highs and mids less reflective and a reduction in bass echo. The AVR room correction (Pioneer's MCACC Pro EQ) applied less correction to the speakers after panels were installed. I'm pleased with the results.

What do friends and family think of the room?

They love it. Upon entering, most are speechless, before being full of compliments. For some it's initially a bit overwhelming when they see a 12ft x 10ft room full of acoustic panels, 13 speakers and a 75in TV that's only 6.5ft from the seating area.

It's always fun to watch their faces for the first time when I play some Blu-ray demo scenes. They're amazed by the picture

and sound and always ask to keep watching the demos.

Some think I'm crazy to have spent this much time and money on the room, but they continue to come by to watch sports and movies. Two stools can comfortably fit behind the main seating area and we've sat five in the room for major events such as the Super Bowl.

What discs do you use to show off the system?

Mad Max: Fury Road, *San Andreas* and *Mission: Impossible: Rogue Nation*. The desert chase scenes in *Mad Max* have awesome sound and the height speakers are used often, those earthquakes in *San Andreas* give the subwoofer and SoundShakers a good workout, and the motorcycle chase scene in *Mission: Impossible* is impressive.

What are your favourite films?

I'll pick three – *The Book of Eli*, *The Dark Knight Rises*, and *The Matrix*.

Will you upgrade to Ultra HD?

Yes. The early versions of 4K were not impressive and didn't give me a reason to want to upgrade. The differences between 1080p were minimal. Recently, I was in an AV store and got to view a top-of-the-line LG OLED playing a 4K/HDR movie. Wow, I was impressed. The black levels were perfect and colours were vivid. It was by far the best picture I'd seen to date, so when prices for a 77in or larger OLED TV with HDR come down a bit, I plan to upgrade.

Lastly: baseball, football, ice hockey or basketball – what's your favourite?

NFL and college football by far. In football every game matters and if you lose one game in the playoffs your season is done! ■

Share your system in the mag!

If you want to be in **HCC**, you'll need to send us some hi-res images of your cinema room. Here are a few tips for great-looking pictures:

1. Go big. Set your camera to take images at the largest possible size, and at the highest resolution. Don't worry about cropping or resizing – we will make them print-ready.
2. Get in focus. Make sure your photos are as sharp and clear as possible. If you have one, use a tripod, or place your camera on a flat, steady surface and take pictures on a delay. The sharper they are, the bigger we can print them.
3. Let some light in. While we tend to watch

movies in the dark, our cinema systems look their best when they are lit. If you can shoot with natural daylight, do so. If your room doesn't get a lot of light (a garage conversion, for instance) then switch on whatever lights are fitted. Avoid using flash wherever possible.

4. Be thorough. Send photos of as much of the room as possible. Images of both the front and back of the room, the kit rack, speakers, seating, disc shelf, movie poster art... The more the merrier.

5. Don't be shy. Send a picture of yourself!
6. Show us more. Got pictures of your room before it was a cinema? Or snaps of work being done? We love to see these, too.

Email your selection of images to letters@homecinemachoice.com with the subject heading 'AV-Holic'. Provide us with some information about your setup – including a full kit list – and we'll then be in touch.





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Feedback

Got an axe to grind? Need to comment on current technology? Want to share your knowledge with our readers? **Team HCC** is here to help

4K TV without HDR

I bought my Sony 49X8505B 4K TV last year and although very pleased with the picture quality and the features I am concerned that if I bought an Ultra HD Blu-ray player, I would not be able to use it with this TV because of the lack of HDR. Can you please put me out of my misery and tell me if I can or cannot use one of these players with my beloved screen?

Paul, Plymouth

John Archer replies: The 49X8505B, launched in 2014, is one of the earlier breed of 4K TVs that doesn't feature support for HDR content – Sony didn't begin its HDR line until 2015. However, it does offer two HDMI 2.0 inputs, so can accept 4K signals up to 60fps, and allows playback of HDCP 2.2-tagged content, which includes Ultra HD Blu-rays and Sky 4K.

Therefore, there's no reason why 4K Blu-rays won't play on the Sony. They will,

however, be presented in SDR, meaning you'll get the benefits of increased resolution (more apparent on some titles than others) but not the native uptick in dynamic range or colour space.



Sony's 49X8505B – not an HDR telly

Box won't play ball

Hello. I was reading with great interest in the latest *HCC* about the ABOX media player mentioned by Jon Thompson [*In the Mix*, *HCC* #265].

Actually I went on Amazon.fr (I live in France) the same day and ordered one – already the next day it was in my mailbox!

This a cool little unit but I have a great problem. I can't get it to passthrough HD sound – not at all! Inside the sound setup I do not have many options as I see it.

Do you have any ideas I can try (the manufacturer claims that it supports HD sound) before I have to return it?

Marius Pedersen, Paris

Jon Thompson replies: The machine certainly should pass HD sound (Dolby TrueHD and DTS-HD Master Audio) over HDMI output.

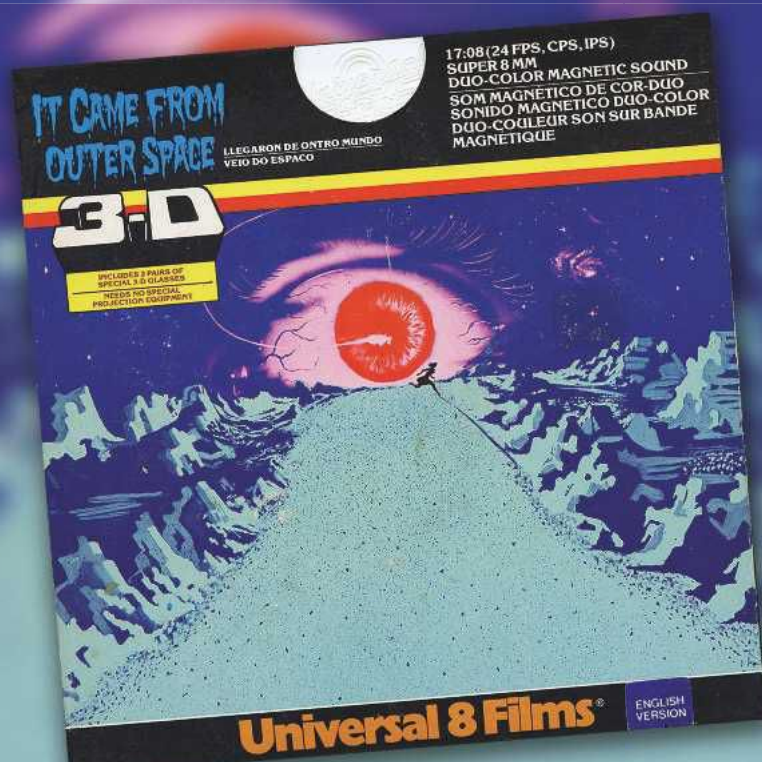
Super 8 – count me in!

Fascinating article in *HCC* #265 about Super 8 collecting. Having been an avid home cinema enthusiast long before the term 'home cinema' was on everyone's lips, I completely understand Martin Dew's enthusiasm for 'real film'. As he says, there are still 8mm fans out there who love their hobby.

I also agree that no home cinema is complete without a film PJ... or two. I have Elmo GS1200 Super 8 and Elf 16mm machines sitting alongside my Epson HD model. Likewise, I still have my Eumig 807D (the dual-gauge model that Martin mentioned), bought in 1976 and in perfect working order (TV makers take note!).

Jack Arnold's sci-fi classic *It Came From Outer Space* is due out next month on Blu-ray 3D. While awaiting the disc, I dusted off my copy of the Universal Super 8 digest version [pictured] for a screening. Okay, it's in anaglyph 3D, but it still looks amazing.

Richard



Go to the Sounds menu, and then select Digital Sounds (not System Sounds). Here you're offered Auto Detection, PCM, HDMI and SPDIF. Select HDMI if Auto Detection isn't picking it up. This should send all audio out via HDMI for your receiver to do the decoding. Try that first and see how you get on before having to return it!

Set a date, please!

Why do you make it so difficult to find the date of the next issue release? Sometimes you use a third of a page a few pages from the back of the magazine to advise of this. But in the October issue [HCC #264] I looked everywhere at least a dozen times but couldn't find it.

Why not set out a spot in the magazine and stick to it month in, month out. Surely it's not that difficult to do. It would save a lot of wasted time, not to mention the frustration!

I have bought your magazine for at least ten years now and I can't do without it. This little irritation is driving me mad, though. I'm hoping you can sort this out once and for all. May I suggest anywhere on page 3? In the meantime, please keep up the excellent work.

PS: I like buying the magazine from WHSmith because our post box is outside and the postman would have to bend it to get it in. Not a chance of that happening, I'm afraid. And that's why I don't subscribe.
Jeff

Mark Craven replies: We run a brief spot with what's featured in an upcoming issue (including the on-sale date) in a slot in our Select buyer's guide section. However, as you noticed in HCC #264, that wasn't there. This was because the Select section wasn't there either – replaced in this instance by our EISA Awards special.

You make a totally valid point, though, so from now on we'll always print the next on-sale date on p3 of the mag. Thanks for the advice!

Should I get a new Blu?

I live in Durango, Colorado, USA, and I purchase your magazine when it comes out at my local magazine shop (Magpie's Newsstand Café). I have a Sony 55in TV, Sony 7.1 AV receiver, Blu-ray player (also from Sony) and Klipsch speakers for my home theatre (a 7.1 system, not Atmos speakers). I also have the Dish satellite service and a Sony CD player hooked up, too.

Haven't tried listening to CDs through the Blu-ray player though, but will do so, to see if there is a notable difference.

I'm thinking of upgrading my Blu-ray deck and want your opinion on whether to purchase the newer Sony UHP-H1 or an Oppo Blu-ray player (not the top-of-the-line model, though). I don't have a 4K or 3D TV – it is an

★ Star Letter...

I upgraded to 4K BD for Dolby Atmos!

Re: Wim van den Broucke's letter in HCC #265 about buying a UHD player to enjoy Atmos mixes on 4K discs. I found myself in a similar situation recently.

Having been a fan of home cinema for many years I have tried many different setups. My first foray was a Toshiba 28in TV which we thought was superb, after this we graduated to the 33in version. Then, in 2011 I purchased an LG HS200 DLP LED projector (800 x 600 native resolution), with a 90in pulldown screen, plus a Sony AVR and a set of KEF 'eggs'. It was the bees' knees and we were in cinema heaven! Then came an upgrade to 7.1 (with Monitor Audio silver speakers) although after downsizing houses it became obvious that my current system was too big for the room, so I decided to sell up the whole system, and persevered with a 50in plasma for the next 18 months.

I then began subscribing to HCC and found my love for home cinema rekindled, and after a small windfall we decided on a modest system that would not intrude on our long but narrow living room – a 7.1 set of Cambridge Audio Minx 22 satellite speakers and a Sony STR-DNI050 receiver. It sounded pretty good, but then I began reading about Dolby Atmos...

The more I read the more I was intrigued so I booked a demo at Audio T in Preston. Well, I was blown away. Time for another upgrade, with a Yamaha Aventure AVR and some Canton ceiling speakers, an LG 1080p projector and a 120in electric tab-tensioned screen. It was all stations go!

I now needed some Dolby Atmos content. I knew that if my Blu-ray-player was capable of playing Dolby TrueHD I would have no trouble playing the Atmos codec. I looked up a current list of titles with Atmos tracks and purchased *Gravity* and *Deadpool*. To my horror when they arrived

neither contained Atmos. I was gutted.

I then discovered that I needed to buy the UHD versions which I did. Got settled down with snacks and a can of beer, inserted *Gravity* to be greeted with a 'cannot play this disc' message. I nearly gave up, but the day after I decided to bite the bullet and risk purchasing a UHD Blu-ray player, my only reservation being 'Would it output to a 1080p display?' I asked a few people supposedly in the know and got no answers, so off I went to Richer Sounds and they too were unsure. Still, at worst I could leave it in the box until I could afford a 4K projector.

I went for the Panasonic DMP-UB900. That's it, the windfall had gone. I got it home, set it up and played *Deadpool*. Wow, wow, wow! I was gobsmacked: the visuals were 10 times better than my original Samsung player but the audio was transformed from very good to awesome, the speaker separation is fantastic. I can honestly say this is the best system I have ever had. So my message to Wim is go for it, you won't be disappointed. And thanks for a great, informative magazine.
Jim Silcock, Preston

Mark Craven replies: Great stuff Jim. Although I should point out that an Atmos version of *Gravity* on regular Blu-ray does exist in the UK – you just need to get the 'Special Edition' incarnation. Enjoy your setup!

Star letter-writer Jim grabs the action blockbuster *The Legend of Tarzan* on Blu-ray courtesy of Warner Bros. Home Entertainment. *The Legend of Tarzan* is available to own on Digital HD from October 29, followed by Ultra HD Blu-ray, Blu-ray 3D, Blu-ray and DVD on October 31. And Jim should be happy to hear that the Blu-ray sports a Dolby Atmos soundtrack!



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older model, seven years old. As is my receiver, Blu-ray player, etc.

Or should I just get an Ultra HD deck?

Furthermore, I enjoy the section on readers' home cinemas and the reason they picked their selections. I certainly do not have a \$100,000 setup, but it is great for my needs, and my available space in my living room. Just me and my dog – so we are easily satisfied!
Wes Crume

Mark Craven replies: You don't say exactly why you're thinking of upgrading your Blu-ray player, but if I was you I'd probably consider an

upgrade to the TV first. Display technology has changed a lot in seven years, and your 2009-era Sony (without knowing the model number) is surely looking a bit dated, not just in terms of design and smart features, but in image quality. Instead of spending on an Ultra HD deck – which would bring minimal benefits to your current setup as you'd be limited to 1080p – consider getting a new 4K TV. You'll probably find you can get a larger screen size without actually taking up much more space in your living room (TVs are slimmer these days); you'll get upscaled playback of your Blu-rays; access to video- >

on-demand content (if you have 'net access); and more efficient and more subtle LED backlighting if your current Sony uses a traditional CCFL backlight.

Make this alteration to your setup, and you could then think about upgrading your disc player to a 4K-capable model. However, if you're desperate for a new spinner right now, the Sony UHP-H1 is a great deal at \$300.

Diamond is forever

Years ago you were suggesting the possibility of concocting a pecking order list for music concert discs. So far, I haven't seen any sign of HCC activity in that direction! Last night I was having a Neil Diamond concert night here at home and I was reminded of this.

Should you proceed, the concert in question is a most entertaining recording of an event in Australia, while the great man was on tour there in 1976. The disc is called *Live 1976: The Thank You Australia Concert*. It's very nicely packaged with double inserts, in a fashion that is quite rare for modern discs. Most regrettably, this concert is in standard-definition – not a BD – or in any kind of high-resolution, which is a crying shame since it has been nicely edited and put together. Of course, this concert was 40 years ago and shows Diamond as a young, less sophisticated performer, but who had a raw energy and captivating presence.



Metallica's *Through the Never* – available in Atmos!

ROSS HALL/METALLICA THROUGH THE NEVER, COURTESY OF PICTUREHOUSE

Anyway, that is merely a bit of background about that disc, and while it might be considered 'niche', would be well justified in having a place in your potential 'Live Concert List', if you include regular DVD standard-def versions as well as BD.

Ivor Phillips

Mark Craven replies: Thanks for the input Ivor. Yes, we did mention the possibility of a concert movie/multichannel music roundup (we even imported the German Blu-ray edition of

Metallica's *Through the Never* with its Atmos soundtrack for that reason), but we admit that it got put on the back-burner. Apologies. Look out for it in the New Year ■

Contact us...

Write to HCC, AV Tech Media Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent, TN8 6HF, or email us at letters@homecinemachoice.com Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.

WIN! Great Blu-rays up for grabs...

Just email your answer to Competitions@homecinemachoice.com to be in with a chance to win



Game of Thrones: The Complete Sixth Season

The latest season of the TV fantasy juggernaut explodes onto DVD and Blu-ray on November 14.

Thanks to HBO Home Entertainment we've got five Blu-rays to give away – to be in with a chance, simply answer the following question correctly...

Question:

What is the name of Rickon Stark's adopted direwolf?

Answer:

- A)** Shaggydog **B)** Scoobydog
C) Scrappydog

Email your answer with 'Game of Thrones Season 6' as the subject heading – and don't forget to include your postal address!



Vikings: Season Four – Volume One

The thrilling adventures of Viking king Ragnar Lothbrok continue in this latest collection of ten episodes.

Vikings: Season Four – Part One is available to own

now on DVD and Blu-ray, courtesy of Twentieth Century Fox Home Entertainment, and we've got five Blu-rays up for grabs!

Question:

Vikings star Travis Fimmel headed up the cast of which recent videogame adaptation?

Answer:

- A)** *The Angry Birds Movie* **B)** *Hitman: Agent 47*
C) *Warcraft: The Beginning*

Email your answer with 'Vikings Season 4.1' as the subject heading – and don't forget to include your postal address!



X-Men: Apocalypse

The new instalment in the hit superhero series is out now to own on Digital HD, followed by Ultra HD BD, 3D Blu-ray, BD and DVD on November 7. To

celebrate, we've teamed

up with Twentieth Century Fox Home Entertainment to give away five *X-Men: Apocalypse* Blu-rays!

Question:

Which of the following actors plays Professor Charles Xavier in *X-Men: Apocalypse*?

Answer:

- A)** Patrick Stewart **B)** James McAvoy
C) Michael Fassbender

Email your answer with 'X-Men: Apocalypse' as the subject heading – and don't forget to include your postal address!

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PLAYBACK

→ **SOFTWARE HIGHLIGHTS** **X-MEN: APOCALYPSE** It's the end of the world as these heroes know it **THE CONJURING 2** Hi-def horrors haunt 1970s London **TEENAGE MUTANT NINJA TURTLES 2** Cowabunga or cowadunga? **PATHS OF GLORY** Classic Kubrick hits Blu-ray **THE HERSCHELL GORDON LEWIS FEAST** Celebrating the late 'Godfather of Gore' & MORE!



Uncharted waters

Game of Thrones: The Complete Sixth Season
→ HBO Home Entertainment → All-region BD

Having left the source novels behind, HBO's hit fantasy series has begun to carve its own path in this latest season. But can it maintain the quality that fans have become used to? Find out as we give the Blu-ray boxset a spin on p101.

HCC RATINGS KEY...	
Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★☆☆☆
Dire	★☆☆☆☆

All prices quoted are approximate and may have changed

Magneto: Master of magnetism and making a mess...



Mutant mayhem multiplies

A new decade and a new villain leads to a surfeit of new mutants in this bloated blockbuster



→ X-MEN: APOCALYPSE

After marrying up the two divergent film franchise timelines with 2014's superb *X-Men: Days of Future Past*, returning director Bryan Singer and writer Simon Kinberg set about continuing the adventures of the younger Professor Charles Xavier (James McAvoy) and his fellow super-powered mutants.

Moving the action to the early 1980s, *X-Men: Apocalypse*'s world-ending threat arrives in the form of En Sabah Nur/Apocalypse (Oscar Isaac), a powerful mutant who once ruled as a God in ancient Egypt, only to end up betrayed and buried alive. Awakening in modern Cairo, Apocalypse concludes that humanity has lost its way and sets about remaking the world in his image.

There's a scene roughly halfway through *X-Men: Apocalypse* that picks up four young mutants leaving a cinema after seeing *Return of the Jedi*. 'At least we can all agree that the third one is always the worst,' says Sophie Turner's Jean Grey in what could be taken as a jibe aimed at 2006's *X-Men: The Last Stand*. Sadly, the statement is equally applicable to this film, which effectively closes out the second trilogy that begun with 2011's *X-Men: First Class*. *X-Men: Apocalypse* is a muddled and messy movie packed with extraneous characters and subplots.

It certainly delivers when it comes to cinematic spectacle, though. Like everything else, the

thinking here seems to be 'bigger is better' – the difference being that with set-piece scenes this approach really pays off. The scale of the action ensures that *Apocalypse* feels like a far greater threat than any previous franchise villain – and it also makes for some X-citing home cinema fodder.

Picture: The film debuts on Blu-ray with an eye-popping AVC 2.40:1 Full HD encode. While the franchise's familiar blue-grey colour palette is still in play, the 1980s setting and explosive visual effects add an array of rich, vibrant primaries to the mix. And despite all of the VFX, there's no real drop-off in clarity or sharpness at any point, with set-pieces such as Quicksilver's rescue mission in the exploding mansion (Chapter 14) offering up loads of fine detail.

Audio: We may not get the Dolby Atmos mix that played in selected cinemas, but the Blu-ray's DTS-HD MA 7.1 track is a fine substitute.

Expansive and energetic, it puts your sofa amidst the centre of a soundscape full of exciting dynamic peaks and troughs, convincing imaging and apocalyptic levels of bass.

Extras: A decent array of extras includes a chat-track from the director and writer; 12 deleted/extended scenes; a six-part *Making of...* documentary (64 minutes); and a gag reel. Hopefully, this means that there's no need for a later 'Special Edition' double-dip.



HCC VERDICT

X-Men: Apocalypse

→ Twentieth Century Fox
→ Region A/B BD → £25

WE SAY: This slightly scrappy, but undeniably spectacular, superhero movie serves up plenty of reference quality AV moments on Blu-ray.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★



Now You See Me 2

Entertainment One → Region B BD
£25



No amount of razzle-dazzle or misdirection can save this sequel to the surprise box office hit from drowning under

the weight of its overly convoluted plotting and endless callbacks to its predecessor. For those who didn't see the first film, this is a complete waste of time, while the best summation for fans of the original comes from the late Paul Daniels: 'You'll like it, not a lot'. On a more positive note, the AVC 2.40:1 1080p encode is bursting with pixel info while the Dolby Atmos mix drips with atmospheric effects. A commentary and three featurettes are also included.



The Angry Birds Movie

Sony Pictures → All-region BD
£25



If the very idea of a film based on the popular game about firing birds at pig-occupied forts sounds utterly hellish,

then this CG 'toon's witty and character-led first half may come as a pleasant surprise. Sadly, the second portion throws all of that out the window as it gets down to the less interesting business of blowing up buildings (even if this does give the DTS-HD MA 7.1 track plenty of chance to show off its bombast). As you might expect, the colourful 1.85:1-framed CG visuals look sensational on Blu-ray. Extras are understandably aimed at kids.



The Neon Demon

Icon Home Entertainment
Region B BD → £20



Nicholas Winding Refn's hallucinatory horror film stars Elle Fanning as a shy young girl who moves to LA to become a model. The narrative that then plays out is even thinner than

a catwalk queen, but still works as a seductive fairy tale that (like the industry it is commenting on) is driven solely by glossy images rather than anything of real substance. On top of its eye-wateringly gorgeous and richly coloured 2.40:1 1080p visuals, this platter packs a powerful DTS-HD MA 5.1 mix that revels in the pulsing bass of Cliff Martinez's score. The BD also features a chat-track and two featurettes.



Scaring up an enjoyable sequel

James Wan's confident return to the horror genre should make fright-fans happy

→ THE CONJURING 2: THE ENFIELD CASE

When a family in London becomes the target for a series of inexplicable and threatening events, US paranormal investigators Ed (Patrick Wilson) and Lorraine Warren (Vera Farmiga) make the journey across the Atlantic to assist the local church in establishing the veracity of their claims. But the Warrens aren't the sort of folk who can stand idly by when others are in trouble and – after witnessing the spooky goings on for themselves – try to do everything they can to help the family, even if it means putting their own lives at risk.

Following a successful sojourn into the world of action blockbusters with last year's *Fast & Furious 7*, director James Wan comes back to the horror genre with this sequel to his supernatural box office smash. And once again he's crafted a well-oiled spookhouse ride full of things that want nothing more than to make the audience jump.

Based on the 'true' story of the Enfield Poltergeist, *The Conjuring 2* is in fact pure Hollywood hokum of the highest order. However, the late 1970s London setting and its mouldy council houses helps the film feel a long way removed from typically slick US offerings, which is useful to distract attention away from the fact that the story borrows so freely and frequently from a host of classic fright flicks.

This doesn't quite reach the same heights as its predecessor (or, for that matter, the BBC's controversial, yet thematically similar, *Ghost Watch*). But it's still an entertaining ghost story loaded with first-rate scare scenes.



Lorraine wasn't thrilled with Ed's decorating skills

Picture: With the film's cinematography shrouding the onscreen action in deep shadows to help enhance the fear-factor, it was vital that this Blu-ray could deliver exceptional black levels. Thankfully, it does that and a whole lot more, including suitably desaturated colours and intricate texturing that gives the interior of the haunted house its squalid feel.

Audio: James Wan has always been keenly aware of the importance of sound in cajoling his audiences, and this film is no exception. The Dolby Atmos mix here is a absolute corker, working relentlessly to build tension and assail your from all directions with terror-inducing noises. The LFE channel gets plenty of use too, with deep, ominous bass accompanying the big scares.

Extras: A middling selection of three behind-the-scenes featurettes, a piece about a haunted soundstage on the Warner lot, four deleted scenes and a look at the 'real' Enfield Poltergeist case.



HCC VERDICT

The Conjuring 2: The Enfield Case

→ Warner Bros. → All-region BD
→ £25

WE SAY: This entertaining sequel benefits from a relentless Dolby Atmos mix on Blu-ray.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★



Godfather of gore, and a fair bit more...

Bumper boxset celebrates the exploitation cinema legend with new restorations and plenty of bloody bonus bits

→ THE HERSCHELL GORDON LEWIS FEAST

A caterer specialising in exotic foods starts targeting buxom beauties in a series of ritualistic killings. An innocent student is lured into a world of smutty photography in order to pay her college tuition.

Biker babes run amok. Yankee tourists stumble upon a strange Southern town where they are brutally murdered. Welcome to the world of the late Herschell Gordon Lewis and his particular brand of exploitation cinema.

Remembered primarily for essentially creating the splatter movie sub-genre with the sensationalist trio of *Blood Feast* (1963), *Two Thousand Maniacs!* (1963) and *Color Me Blood Red* (1965), Lewis actually had his hands in a number of exploitation cinema pies. He started out in so-called 'nudie-cuties', then interspersed his horror output with low-budget flicks about juvenile delinquents, bike gangs, moonshiners, the music industry, wife swapping and so much more. And every single one of them demonstrated his singular inability to coax a good performance out of an actor or give a damn about technical matters such as framing or focus.

In other words, he was a pretty inept filmmaker. But despite all of these issues (or, more likely, because of them) the films of Herschell Gordon Lewis stand apart from other exploitation-fests.



Glorious gore-fests: *Blood Feast* (top) and *The Gruesome Twosome* (above)



The Scum of the Earth! on the run (above)



Other films of this ilk and era can seem rather dull today; Lewis's continue to surprise and entertain, even if much of this may be a reaction to the shoddy sets, lousy scripts, terrible performances and clunky editing.

Arriving on shelves by some odd quirk of fate just a matter of weeks after Lewis passed away at the age of 90, this limited edition Blu-ray boxset from Arrow Video does not offer a comprehensive collection of his movies. However, excluding a few obvious candidates (none of his early 'nudie-cuties', not even *The Adventures of Lucky Pierre* or *Goldilocks and the Three Bears*, are included) the set curates 14 films that give a fine overview of the bulk of his career. It also surely includes all of the key titles fans would expect (plus a few surprise treats).

The complete list of titles (as they appear in the set) runs as follows: *Blood Feast* (1963), *Scum of the Earth!* (1963), *Two Thousand Maniacs!* (1963), *Moonshine Mountain* (1964), *Color Me Blood Red* (1965), *Something Weird* (1967), *The Gruesome Twosome* (1966), *A Taste of Blood* (1966), *She-Devils on Wheels* (1967), *Just For the Hell of It* (1968), *How to Make a Doll* (1968), *The Wizard of Gore* (1970), *The Gore Gore Girls* (1972) and *This Stuff'll Kill Ya!* (1971).

Rest assured that each and every one lives up to its lurid title. And you'll never see anything else quite like them.

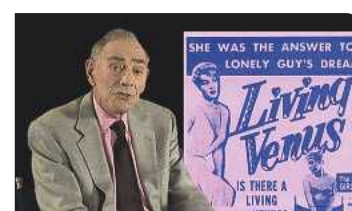
Picture: Apart from the existing HD masters of *Two Thousand Maniacs!* and *The Gore Gore Girls*



Lewis always claimed *A Taste of Blood* (below) was his masterpiece. It's not.



Above: go-go mad with *The Gore Gore Girls*



The 'Godfather of Gore' himself (above)

supplied by Something Weird, all of the films in this boxset have been exclusively restored under the supervision of Arrow's in-house restoration guru James White.

Blood Feast, *Two Thousand Maniacs!*, *Color Me Blood Red*, *She-Devils on Wheels*, *Just For the Hell of It* and *The Gore Gore Girls* were all restored from original camera negatives and look far better than we could ever have expected. Colour reproduction and detailing are particularly strong, and there is very little in the way of dirt or print damage in evidence.

With original elements believed lost, Arrow had to restore *Scum of the Earth!*, *Something Weird*, *The Gruesome Twosome*, *How to Make a Doll*, *The Wizard of Gore* and *This Stuff'll Kill Ya!* from 35mm prints. Naturally, these tend to look a little softer and suffer from much more noticeable wear and tear (including heavy dirt, scratches and tramlines, not to mention significant colour fading).

Then we have a couple of piecemeal affairs. *A Taste of Blood* is primarily based on a restoration of the original camera negative, but missing sections had to be created using a faded 35mm print instead. Even more varied is *Moonshine Mountain*, which is not only based on a selection of 35mm prints of varying quality, but also uses some standard-def tape sources to replace missing frames. This jigsaw-like approach may not make for the prettiest viewing experience, but does present us

with the most complete version possible of this little-seen film.

The two titles supplied by Something Weird are presented solely in widescreen. All of the Arrow restorations are presented in 1.33:1, with *Blood Feast*, *Scum of the Earth!*, *Color Me Blood Red*, *A Taste of Blood* and *The Wizard of Gore* also getting alternate 1.85:1 versions.

Audio: While a similar level of care and attention has been paid to cleaning up the films' soundtracks, the truth of the matter is that they were pretty limited affairs in the first place. Predominantly thin and flat, the best you can really say for the set's various LPCM mono mixes is that they are as good as the source material will allow. And no one is clamouring for Atmos remixes of this motley crew of movies...

Extras: This premium-priced Blu-ray boxset describes itself as a 'feast' as that certainly applies to the collection of bonus goodies. Across the many platters you'll find intros to the films by Lewis; audio commentaries; new interviews with the filmmaker, his collaborators and fans; outtakes; video essays on a variety of related topics (such as the depiction of the American South in exploitation cinema); an episode of *The Incredibly Strange Film Show*; and a wonderful 106-minute documentary about Lewis' entire career.

The set also comes with a 28-page 'Herschell Gordon Lewis Annual' packed with puzzles, activities and archival promo material. Fun for all the family! ➤

HCC VERDICT

The Herschell Gordon Lewis Feast

➔ Arrow Video ➔ All-region BD & RO DVD ➔ £175

WE SAY: An astonishing celebration of one of the genuine legends of exploitation cinema.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

Arcade Action

Bigscreen home entertainment isn't just about movies anymore. **Rik Henderson** checks out a videogame vying for time on your home cinema system...



Gears of War 4

Microsoft Studios → Xbox One, PC → £50

When Microsoft first published Epic Games' *Gears of War* for the Xbox 360 it couldn't have known just how enduring the series would become. But the action franchise has almost as fervent a fanbase as *Halo* these days and it was only a matter of time before the Xbox One would get its own, original chapter.

Not only is *Gears of War 4* the first instalment made entirely for this console generation, it's also the first to be part of Microsoft's Play Anywhere scheme, whereby those who buy a copy digitally get a free copy of the Windows 10 PC version, and vice versa. They also feature cross-play, so you can save on one and pick up on another.

The single-player campaign is the best in the series so far. Characterisation, plot structure and theme are more cinematic than before. Former *Gears...* games have been more about getting your soldiers from one massive skirmish to another, and could be hackneyed in scripting. However, there's something more *Uncharted* about the latest, with moments of humour, friendship and family punctuating the ripping off of enemies' faces.

Multiplayer is par for the course, but that aspect has always been of a high standard anyway. It differs because, just like the rest of the game, it's more colourful and vibrant. The earlier games were almost black and white, such were the stark colourfields chosen. *Gears of War 4* is positively rainbow-esque in comparison.

The graphical presentation is even more striking when rendered in 4K on a PC hooked up to a telly. Of course, to get that sort of rig running you'll need to run a graphics card such as the Nvidia GeForce GTX 1080, but it's well worth it based on this experience.

That's not to say the Xbox One S version doesn't hold its own. While the game isn't native 4K – the console upscales to that resolution instead – it does feature HDR, which adds notable zing to the already sumptuous graphics. We look forward to future titles supporting the tech.

Gears of War 4 is a triple-A title in every respect. Its campaign is the best yet and as a workout for your kit, it's currently unparalleled.



The Iron Giant: Signature Edition

Warner Bros → All-region BD
£12



After what seems like forever, director Brad Bird's 1999 animated masterpiece has finally been given the release it deserves. Originally dumped into cinemas (and then onto VHS and DVD) with little fanfare, *The Iron Giant* has only grown in stature over the years – and while this Blu-ray sports a budget price-tag it's packed with premium content. In addition to two cuts of the film (which look and sound practically perfect in HD), the disc boasts a plethora of extras, including a remarkably frank account of the film's production and box office failure.



DISC
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MONTH

American Crime Story: The People v O.J. Simpson

Twentieth Century Fox → R2 DVD
£28



Just the thought of the makers of *American Horror Story* and *Scream Queens* tackling the racially sensitive story of the O.J. Simpson trial was enough for some to write-off this 10-part series before it even aired. More fool them. Not only is this first season of *American Crime Story* one of the best TV dramas you'll see all year, its analysis of US race relations resonates given the ongoing Black Lives Matter movement. The four-disc DVD release looks decent, and has an excellent 28-minute documentary, but Fox's decision to skip BD in the UK is criminal.



Creature Designers: The Frankenstein Complex

StudioCanal → R2 DVD
£17



Monsters have been a regular feature on the silver screen since its birth over a century ago. This fun documentary celebrates the talented folk responsible for creating them, charting the development of practical creature effects through the years, before illustrating how the digital revolution of the 1990s marked the end of an era. As well as an attractive anamorphic 1.78:1 transfer and clear DD5.1 and 2.0 audio tracks, this fun DVD crams in plenty of bonus bits.





Part girl, part plant, all freaky...



Into the great unknown...

Fantasy series suffers no drop in quality as it leaves its source material behind

→ **GAME OF THRONES: THE COMPLETE SIXTH SEASON**

These are interesting times for HBO's epic fantasy. With author George R.R. Martin still holed up somewhere beaver away on the sixth novel in the series (*The Winds of Winter*, release date TBC), the TV adaptation hasn't just caught up with the books, but in its sixth season is having to chart its own course. So how is the show faring without the luxury of one of Martin's novels to draw upon?

As it happens, it appears to be in fine shape. Without getting into too many specifics – because there's nothing *Game of Thrones* fans hate more than spoilers – this new run finds the pace quickening now that the end is in sight (HBO has confirmed that only two more seasons are planned). Suddenly, storylines that had seemed to be stuck in place spinning their wheels are being brought to a close.

This feeling is compounded by the decision to bring back characters who have been absent from the last few seasons. Wondering what Bran Stark has been up to North of the Wall, or what's been happening on the Iron Islands since our last back visit all those years ago? Well, now you'll get to find out.

The escalation in momentum is balanced out by the quality of the storytelling. While there's no guarantee that Martin's final novels will follow the

same path, the choices the show's producers make feel entirely in keeping with what has gone before.

Once again, it all leads up to a spectacular finale. Here, there's an epic battle between two armies that wouldn't look out of place in a bigscreen blockbuster and, once again, sees *Game of Thrones* redefining the notion of what can be achieved in a television series.

Picture: As with the earlier releases, this latest season of looks outstanding in HD. Colours are frequently rather subdued, but still appear faithful, while detailing is absolutely immaculate and contrast is excellent. Limiting the release to just two or three episodes to a disc once again helps negate potential compression issues.

Audio: For the most part, the set's Dolby Atmos tracks are content to use the additional height layer for discrete atmospheric effects. However, this all changes with episode nine's mega battle, where aggressive and impactful sound design employs every trick in the book (and every speaker in your setup) to ground you in the heart of the action. Just be aware that the discs default to lossy Dolby Digital 5.1 for some retro reason.

Extras: The pricey Blu-ray boxset features chat-tracks and interactive *In-Episode Guides* for every episode, three behind-the-scenes documentaries, deleted scenes and 18 new *Histories & Lore* vignettes. No real surprises then, but still top-notch stuff.



The budget for the show's sixth season increased to \$10m per episode!



HCC VERDICT

Game of Thrones: The Complete Sixth Season

→ HBO Home Entertainment
→ All-region BD → £50

WE SAY: At the risk of repeating ourselves again, this is a brilliant BD boxset for HBO's crown jewel.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★





Between heaven and hell...

Cult comic book adaptation unleashes a blasphemous bloodbath on your telly

→ **PREACHER: SEASON ONE**

It may be based on a comic book and feature a protagonist with mysterious powers, but *Preacher* couldn't be further removed from the sort of superhero films and TV shows that currently dominate the screen (big and small).

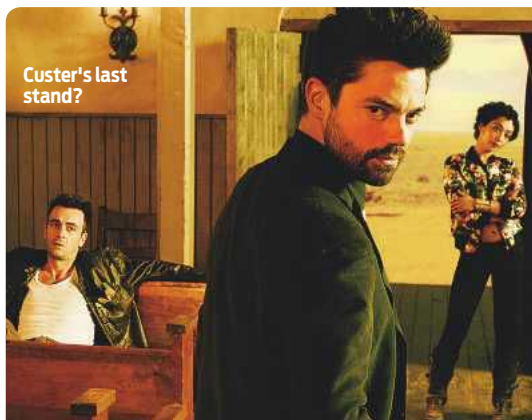
Dominic Cooper stars as Jesse Custer, a smalltown preacher with a shady past whose life gets even more complicated when he becomes the host for a supernatural entity that gives him the power to make other people do whatever he wants. Also along for the ride are Jesse's criminal ex-girlfriend Tulip (Ruth Negan) and hard-drinking Irish vampire Cassidy (Joseph Gilgun).

To say that *Preacher* is a bit nutty is underselling the show massively. The entire series – produced by Seth Rogen and Evan Goldberg – is a celebration of the bizarre; packed to the gills with characters and events that veer towards the outré and the profane. Where else are you going to see a chainsaw fight between a vampire and an angel in a church?

It meanders a little in the middle of its 10-episode run, but based on what the show achieves in this first season – and knowing that even more messed-up storylines from the comic are waiting in the wings, – we'll definitely be back for Season Two.

Picture: Sony Pictures' Blu-ray release splits the ten episodes across three HD platters – four each on the first and second, the remaining two on the third.

For the most part the picture quality is very good, with the AVC 1.78:1-framed 1080p encodes doing an good job of recreating the show's stylised yellow tinting. Elsewhere, scenes with more natural grading



reveal an extremely pleasant colour palette as well as strong black levels and heaps of fine texture in clothing and other surfaces.

The only quibbles we have is that darker scenes can have a tendency to look quite noisy (no doubt due to the digital cameras used) and that the picture breaks up for a couple of frames at around the 37:58 mark in the fourth episode. However, while this glitch was repeated on multiple BD decks, we've currently no way of knowing if it will affect the finished discs or just the advance review copies we were sent.

Audio: *Preacher*'s DTS-HD MA 5.1 tracks provide suitably punchy and precise accompaniment to the onscreen action. Separation across the front of the soundstage is excellent, bass response is engaging and dialogue is always prioritised.

Extras: A modest selection includes 15 extended/deleted scenes, a gag reel and four sub-10-minute behind-the-scenes featurettes.



HCC VERDICT

Preacher: Season One

→ Sony Pictures → Region A/B BD
→ £35

WE SAY: Despite a couple of niggles, this stylish and sacrilegious show makes for divine hi-def fun

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

Underbelly: Season 2 – A Tale of Two Cities

Simply Media → R2 DVD
£30



The second series of Australian crime drama *Underbelly* has at last been granted a DVD release on these shores

after airing in 2009. This 13-part story dials back the clock to the late '70s/early '80s to explore the real-life exploits of the 'Mr. Asia' drug ring. Just as hard-hitting as its predecessor, *A Tale of Two Cities* is a gripping follow-up that has us praying that we don't have to wait quite so long for the 2010 sequel *The Golden Mile* to hit DVD. While there are no extras, this four-disc set's anamorphic 1.78:1 transfers and Dolby Digital 2.0 audio are fine.



Vikings: Season Four – Volume One

Twentieth Century Fox → All-region BD
£40



With its double-sized season split into two distinct halves, this first part of *Vikings*' fourth year is largely concerned

with the aftermath of Ragnar's earlier adventures in France, building towards a confrontation with his estranged brother, now Count Rollo, protector of Paris. This superior series continues to impress on Blu-ray with gritty AVC 1.78:1 Full HD visuals and thrilling DTS-HD MA 5.1 sonics. Bonus features take the form of commentaries on two episodes, two *Making of...* videos and an interactive guide to Ragnar's sons.



Modern Family: Season Seven

Twentieth Century Fox → R2 DVD
£28



If history has taught us anything, it's that the seventh season is the point at which any long-running sitcom begins

its inevitable decline. But *Modern Family* has never been your typical sitcom, and this latest batch of 22 episodes shows no real drop-off in quality, with big laughs still coming thick and fast. With Fox having stopped releasing the series on Blu-ray several years ago, fans will once again have to make do with DVD. The 1.78:1 transfers look crisp and well saturated, while the Dolby Digital 5.1 mixes are understandably front-biased.



Dr. Strange

Universal Pictures → R2 DVD
£10



This 1978 TV movie was clearly designed as a pilot for a potential series along the lines of *The Incredible Hulk*.

That it didn't happen is due to the fact that a '70s TV budget just couldn't do the character justice, so instead of psychedelic magical battles we get countless scenes of people wandering around hospital corridors. That said, you can't completely write-off any film that features *Arrested Development*'s Jessica Walter as an evil sorceress arguing with a demon that looks like Beaker from *The Muppets*. While this budget DVD looks and sounds surprisingly good, there are no extras whatsoever.





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The sort of face that only a mother (or another mutant) could love...



Heroes in a half-cocked shell?

Comic book sequel dispenses with the serious posturing in favour of having some cowa-fun-ga!

→ **TEENAGE MUTANT NINJA TURTLES: OUT OF THE SHADOWS**

A year on from saving New York City from Shredder (Brian Tee) and the Foot Clan, ninja turtles Leonardo (Pete Ploszek), Donatello (Jeremy Howard), Raphael (Alan Ritchson) and Michelangelo (Noel Fisher) are still living in the sewers and arguing amongst themselves about whether to keep operating in the shadows or expose their existence to the world.

When Shredder escapes from prison with the aid of scientist Baxter Stockman (Tyler Perry), a freak teleporter accident sends him to an alternate dimension where he meets Krang, a blobby alien brain monster with designs Planet Earth. In exchange for helping Krang's invasion plans, Shredder is given a mutagenic compound that he uses to create his own mutant monster lackeys – and which could also turn the turtles into humans, enabling them to live a normal life above ground.

Like the typical teenager, *...Out of the Shadows* is noisy, obnoxious and shows few signs of intelligence. Yet, for all of that, it's actually an improvement on its thoroughly awful predecessor. Moving away from the more serious approach that scuppered that film, this action-packed follow-up harks back to the fondly-remembered '80s cartoon and is stuffed with fan favourite characters including masked vigilante Casey Jones (Stephen Amell) and Shredder's idiotic hench-mutants Bebop (Gary Anthony Williams) and Rocksteady (WWE star Sheamus).



HCC VERDICT

Teenage Mutant Ninja Turtles: Out of the Shadows

→ Paramount → All-region BD
→ £25

WE SAY: Though not without its own problems, this blockbuster sequel improves on its predecessor while delivering reference-quality AV.

Movie: ★★★★★★

Picture: ★★★★★★

Audio: ★★★★★★

Extras: ★★★★★★

OVERALL: ★★★★★★

It also does a much better job of differentiating between the turtles. This time each has a distinct body shape and silhouette, rather than having to rely on eye-masks as the primary visual cue. It's just a shame that less thought has been put into the human characters. Amell's Casey Jones lacks the original incarnation's deranged edge, and Megan Fox is still being relegated to little more than eye candy in the role of April O'Neil. The filmmakers even contrive a way of getting her to dress like a schoolgirl in one scene.

Picture: To the surprise of nobody at all, this mega-budget visual effects extravaganza looks sensational on Blu-ray. Presented in its original 2.40:1 aspect ratio, the 1080p encode benefits from the decision to take the film's action scenes 'out of the shadows' into broad daylight. The result is a mix of vibrant colours, impeccable clarity and a surfeit of fine detail in every shot.

Audio: Similarly, the disc's Dolby Atmos mix offers a masterclass in dynamic sound design. Barely a minute passes without something whipping across the soundstage, while bass support is as deep as you could hope for. The height channels get plenty of use throughout. Amazingly, against all of this, the inane dialogue is still cleanly rendered and never gets lost in the mix.

Extras: In addition to a trio of deleted scenes, the Blu-ray offers a VFX progression reel, tours of the turtles' redesigned lair and new vehicle, a look at the new characters and a quick guide to some of the in-jokes and Easter Eggs crammed into the movie.

Money Monster

Sony Pictures → All-region BD
£25



Jodie Foster's fourth outing as director stars George Clooney as Lee Gates, a glib financial news TV

anchor who is taken hostage live on air by a young man (Jack O'Connell) who lost all his money after investing in one of Lee's sure-fire tips. Smart, tense and very watchable, *Money Monster* lands on Blu-ray with a pleasingly natural 2.40:1 Full HD transfer and atmospheric DTS-HD Master Audio 5.1 soundfield (which opens up significantly in the final act). Modest extras take the form of deleted scenes, a trio of featurettes and a music video.



The Commitments: 25th Anniversary Ed.

RLJ Entertainment → All-region BD
£20



Arguably the highlight of Alan Parker's career as a director, this 1991 bigscreen adaptation of Roddy Doyle's novel is

a fast-talking, funny and foul-mouthed blast of musical brilliance that manages to leave a smile on your face after each viewing. This long-awaited UK Blu-ray will do nothing to diminish your grin either, thanks to its authentically film-like 1.85:1 1080p visuals and a rousing DTS-HD MA 5.1 soundtrack that gives the music even greater depth and range. Extras include a new retrospective documentary and all sorts of archival goodies.



Gremlins 2: The New Batch

Warner Bros → All-region BD & R2 DVD
£15 (HMV exclusive)



It may not have been the sequel the studio, or most audiences, were expecting, but director Joe Dante's *Gremlins 2*

remains an energetic and imaginative slice of cinematic mayhem that seems like nothing less than a *Looney Tunes* cartoon come to life. It debuts on UK Blu-ray with a good-looking 1.78:1 1080p encode (which should even please those who took against its predecessor's HD release), alongside a rambunctious DTS-HD MA 5.1 soundtrack. A chat-track kicks off a solid selection of extras that also includes 22 minutes of outtakes.



Bowfinger

Fabulous Films → Region B BD
£20



Surely the last great comedy for both Steve Martin and Eddie Murphy, this madcap 1999 Hollywood satire

finds a washed-up filmmaker (Martin) setting out to make a low-budget sci-fi flick with a major movie star (Murphy) who doesn't know that he's even in it. Sadly, this Blu-ray doesn't quite do the film full justice, with edge enhancement and a smattering of noise reduction making it clear that it's been sourced from an older HD master. On a more positive note, the DTS-HD MA 5.1 mix is pleasingly lively and this hi-def platter retains all of the old DVD extras.



The girl with kaleidoscope eyes...

Scarlett Johansson truly dazzles in this 4K HDR update of Luc Besson's bonkers blockbuster

→ LUCY

There's always a touch of madness about the films of Luc Besson. Sometimes this works, sometimes it doesn't. With *Lucy*, it mostly works. The story – about a woman who gains the ability to use the entire capacity of her brain – starts off daft and gets crazier, but Besson's flare for action, some breathless pacing and a committed performance from Scarlett Johansson keep you locked in for the ride.

Picture: The majority of *Lucy* was filmed and mastered in 4K, and this UHD Blu-ray does a masterful job of reproducing the full resolution of the source material.

Close-ups of faces reveal every pore, hair and blemish (even Johansson's skin isn't perfect). Cityscapes have seemingly endless depth to them; interiors look more solid and real; you can make out every fibre in clothing. I could go on, but you get the picture. For our money Besson's barmy blockbuster is the most consistently detailed and crisp UHD Blu-ray yet.

Lucy also makes the most of the format's HDR and wide colour capabilities. A noticeably stronger sense of contrast than you get with the standard Blu-ray permeates every shot, creating a gorgeously cinematic look – except few cinemas actually manage to look so good.

Bright highlights pop off the screen with a realistic intensity, while colours are stunningly intense. Light-on-dark shots like Taipei at night reveal the UHD BD's extra colour intensity most aggressively, but actually, as with the contrast, the extra richness and subtlety of the colour impacts every frame.



The picture of 4K HDR perfection?

Audio: Unlike the bundled Full HD Blu-ray, *Lucy*'s Ultra HD Blu-ray carries a Dolby Atmos mix. The first thing you'll notice is the reach of the bass track, which will have things rattling in your cinema room that may never have rattled before. There's also strong use of the height channel as well as aggressive front-to-back, back-to-front and side-to-side transitions during the film's more sustained action scenes.

Meanwhile, the way the thumping score has been mixed to use of all of the available channels is also a treat. Admittedly, the music threatens to become almost distractingly dominant at times, but for the most part this superb mix reminds just what a positive difference Atmos can make.

Extras: The Ultra HD Blu-ray disc carries no extras whatsoever. Which means that fans are left with the same old pair of insubstantial featurettes on the Full HD Blu-ray platter that accompanies it.



HCC VERDICT

Lucy

→ Universal Pictures → Ultra HD BD & All-region BD → £25

WE SAY: Luc Besson's cult hit gets one of the best UHD BD treatments we've seen from the format so far.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★☆☆☆

OVERALL: ★★★★★



On the path to hi-def success

Stanley Kubrick's classic anti-war film leaves a lasting impression on Blu-ray

→ **PATHS OF GLORY**

Kirk Douglas stars in this powerful World War One drama about three French soldiers chosen at random to represent 100 troops accused of cowardice for refusing to take part in a suicidal attack on a well-defended German stronghold. With the trio facing execution, Douglas' Colonel Dax volunteers to defend them, only to find himself fighting against amoral superiors who care for nothing beyond their own advancement.

Based on a 1935 novel by Humphrey Cobb (itself inspired by real events), *Paths of Glory* is one of the most devastating anti-war films to ever come out of Hollywood. It's also a key flick in director Stanley Kubrick's career: not just demonstrating the ongoing development of his craft, but also marking the juncture between his smaller independent films and larger studio projects (arriving as it did between 1956's *The Killing* and 1960's *Spartacus*).

Alongside the recent HD release of the longer US edit of *The Shining* on these shores, *Paths of Glory* marks the long-awaited completion of Kubrick's Blu-ray filmography in the UK. And, as you'll discover, it's definitely been worth the wait...

Picture: Apparently sourced from the same 2K restoration (supervised by Kubrick's technical assistant Leon Vitali) that served as the basis for Criterion's Region A-locked 2010 platter, this Masters of Cinema release delivers a great-looking 1.66:1 1080p presentation of the film.

The monochrome cinematography is expertly handled with a pleasingly nuanced greyscale sitting between the deep blacks and crisp whites. Clarity



and sharpness also impress, resulting in a beautifully detailed image. Meanwhile, print damage and debris are mostly absent, as are any compression issues stemming from the disc's encoding.

Audio: There aren't any real surprises where *Paths of Glory*'s soundtrack is concerned. Given that the film was first released in 1957, it shouldn't come as a shock to discover that this Blu-ray sticks to a clean and stable, if slightly thin sounding, LPCM 2.0 dual-mono presentation.

Extras: Rather than licensing the extras from the Criterion release, this UK platter offers a bunch of exclusive goodies. These are a detailed commentary by film critic Adrian Martin, an isolated music and effects track, and new interviews with Kubrick scholar Peter Kramer (15 minutes) filmmaker/fan Richard Ayoade (24 minutes) and critic/author Richard Combs (10 minutes). The trailer and a 36-page booklet are also included.



HCC VERDICT

Paths of Glory

→ Eureka: Masters of Cinema
→ Region B BD → £20

WE SAY: The Kubrick classic has been treated with the respect it deserves on this wonderful Blu-ray.

Movie: ★★★★★

Picture: ★★★★★

Audio: ★★★★★

Extras: ★★★★★

OVERALL: ★★★★★

One Million Years B.C.

StudioCanal → Region B BD & R2 DVD → £23



Clad only in that animal fur bikini, Raquel Welch's curvy cavegirl has always been one of the more memorable aspects of Hammer's prehistoric epic.

Even so, she's never looked

quite as ravishing as she does here, with the new 4K restoration behind this Blu-ray giving the film's exotic visuals a boost in sharpness and clarity. Unsurprisingly, the polished 1.66:1 1080p transfer also does wonders for Ray Harryhausen's stop-motion dinosaurs – despite the softness inherent in some of the opticals. Bonus bits include a gallery of Harryhausen's art and models, plus interviews with Welch and actress Martine Beswick.



Eyewitness

Signal One Entertainment
Region B BD → £16



Despite the presence of Peter (Bullitt) Yates behind the camera and the likes of Sigourney Weaver, William Hurt,

Christopher Plummer and James Woods in front of it, this 1981 murder mystery fails to click into high gear. Not that this stops Signal One from delivering yet another commendable Blu-ray package. The disc includes solid 1.85:1 Full HD visuals and LPCM 2.0 audio, plus the option to watch the film under its alternate title (*The Janitor*), the full open matte 4:3 UK VHS presentation (complete with tracking errors), a chat-track, and two lengthy interviews.



40th Anniversary Edition

The Man Who Fell to Earth

StudioCanal → Region B BD & R2 DVD → £23



Fans of Nic Roeg's absorbing sci-fi drama are rather spoilt for choice when it comes to Blu-ray releases. Even if

you discount Criterion's out-of-print 2008 US platter, then StudioCanal's own 2011 UK Special Edition held its own as an AV all-rounder. This new release ups the ante with an upgraded 2.35:1-framed 1080p encode based on a new 4K restoration. Audio once again is limited to the original stereo track, albeit now as a DTS-HD MA mix rather than LPCM. Additional extras include a 1977 interview with Bowie and a video about his 'lost' music for the film.



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Ghost stories

Set yourself up for a spooktacular Halloween marathon with this ten-pack of spectral frighteners curated by **Team HCC**, ranging from classic hauntings to found-footage blockbusters

THE SHINING

A terrifyingly effective chiller, combining the wonderful oddness of Stephen King's novel with Stanley Kubrick's unnerving direction and Jack Nicholson's maniacal turn as a hotel caretaker with a really bad case of cabin fever. Sure, *The Shining* offers more questions than answers as it navigates a maze of ghosts, telepathy and mental breakdown, but that's all part of the charm – a film that'll leave you haunted...

Get it: Two edits of *The Shining* exist – the 'international cut' and the original US version that's 25 minutes longer. The latter can be imported on a region-free 2007 Blu-ray. UK buyers have made do with the international edit, although a recent HMV exclusive brings it to Region B BD for the first time. A 4K release would be welcome, though!

Right: Shelley Duvall wishing she'd checked in to a Premier Inn

TOP PICK



DARK WATER

Plenty of ghostly goings-on in modern Japanese cinema, but our favourite is this 2002 effort from *Ring* director Hideo Nakata, which sees its suspenseful tale of a disappeared girl riding on an undercurrent of sadness and grief. Moody, languid and littered with stark imagery, it was remade in the US in 2005 with Jennifer Connelly in the lead role.

Get it: Available only on DVD until a very recent Blu-ray release by Arrow Video, featuring new extras and specially-commissioned reversible cover art.



THE INNOCENTS

Based on Henry James' strange and sinister gothic novella *The Turn of the Screw*, this 1961 black-and-white classic stars Deborah Kerr as the new governess at a country house, who comes to believe that the children living there are corrupted by the spirits of their former governess and her lover. Beautifully shot and genuinely unsettling in its final scenes, this is a giant of the genre.

Get it: The BFI's excellent 2010 Blu-ray can these days be picked up for less than a tenner.



THE DEVIL'S BACKBONE

Guillermo del Toro bounced back from a disappointing experience in Hollywood making *Mimic* with this much more personal (and successful) film. Set during the Spanish Civil War, this brooding ghaster is perhaps the best of the director's attempts to show that no matter how scary the supernatural may be, humans are still the worst monsters of all.

Get it: If you're set up to play Region A discs, the Criterion Collection platter from the US is the best release around.



THE BLAIR WITCH PROJECT

This certainly looks like a film shot on a micro-budget, but it scares better than many of its glossier rivals. A trio of filmmakers on the hunt for a murderous ghost come a cropper in the woods; we only get to see what the camera saw...

Get it: Just one BD release for *The Blair Witch Project*, which naturally looks a bit iffy considering its found-footage status – it's a 4:3 image, low on colour and not very sharp. Stereo audio, too, and it's a film crying out for some retrospective extras.



THE HAUNTING

The power of suggestion is the key to why Robert Wise's 1961 screen adaptation of *The Haunting of Hill House* still feels every bit as fresh and sophisticated (not to mention downright spooky) as it surely did upon its original cinema release. However, don't go mixing it up with Jan de Bont's bombastic 1999 remake, which is an utterly horrifying cinematic experience for very different reasons.

Get it: *The Haunting* still isn't available on Blu-ray in the UK, but Warner Bros released a rather lovely all-region HD platter in the US in 2013 that shouldn't cost you more than £15 to import.



THE WOMAN IN BLACK

The reborn Hammer Films studio scored its biggest hit so far with this impressive movie version of Susan Hill's 1983 novel. Daniel Radcliffe shrugs off his Harry Potter cape to play a lawyer unravelling the mystery of the havoc-causing title character. Brit director James Watkins manages the period setting and creepy visuals with a steady hand.

Get it: Momentum's great-looking UK BD features the theatrical 12-rated cut. If you must have the uncut 15-rated release (which is six seconds longer), check out a Region B BD German import.



POLTERGEIST

The closest we'll probably ever get to a Steven Spielberg horror film – the bearded genius served as writer/producer, while Tobe Hooper directed. A big-budget shocker with high production values, this is an oft-overlooked genre classic, and far superior to its two direct sequels and last year's remake. The only downside is that it may make you scared of your TV.

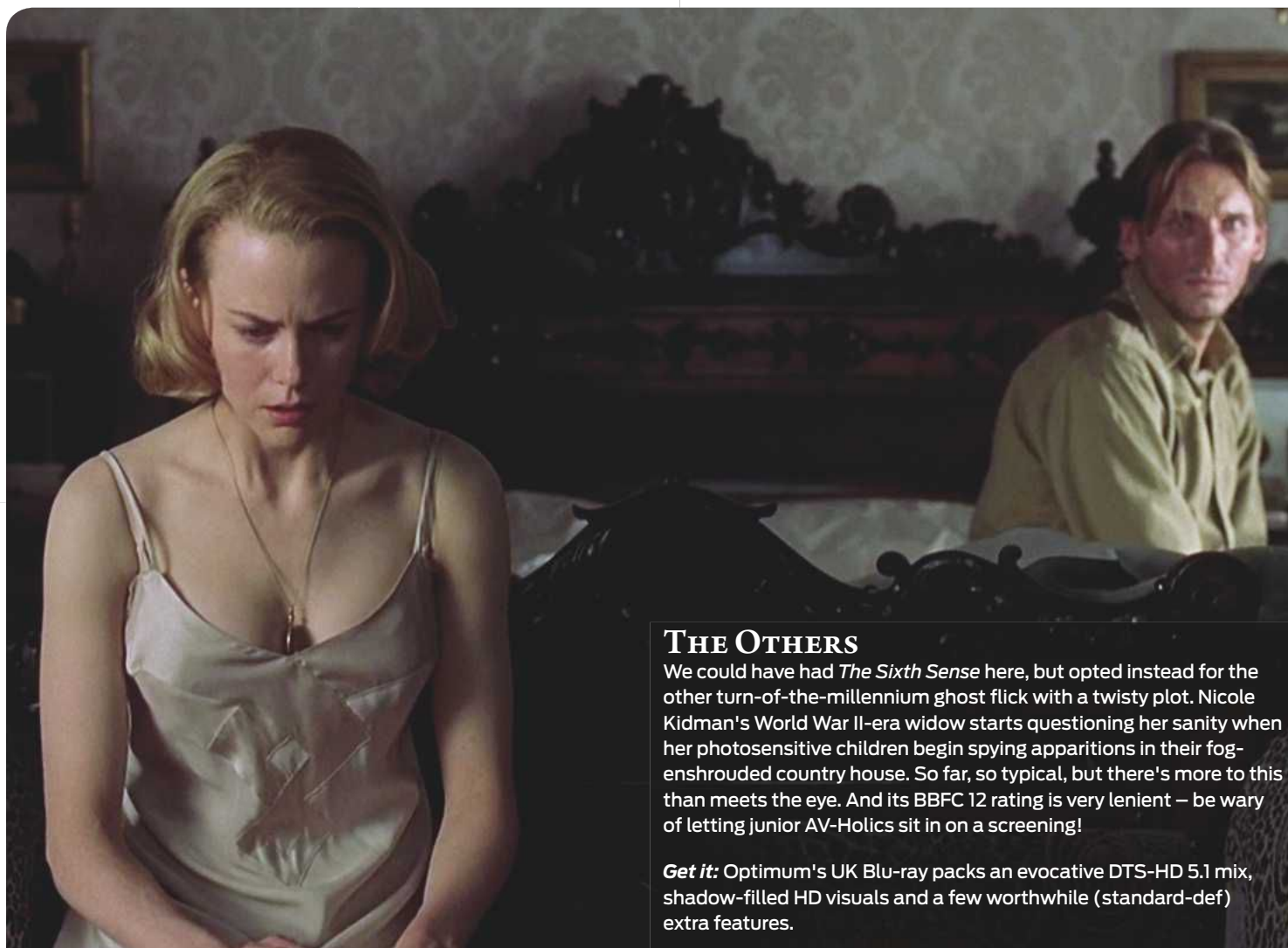
Get it: Released on Blu-ray in 2008 upon its 25th anniversary, with a brilliant HD transfer, punchy TrueHD 5.1 audio and no decent extras. There's still no sign of a trilogy boxset.



THE CONJURING

Creaking doors. Sleepwalking children. A freaky doll. There's a lot crammed into this 'based on a true story' horror focusing on the duo of paranormal investigators who inspired *The Amityville Horror*. Yet what's important is that *The Conjuring* is very scary, building up a relentless sense of dread (helped by a fantastic score) and knowing when to go all out with its jump scares.

Get it: Warner's BD release features the AV quality that you'd expect from a modern movie. Crisp, clean visuals and stonking DTS-HD MA 5.1 audio.



THE OTHERS

We could have had *The Sixth Sense* here, but opted instead for the other turn-of-the-millennium ghost flick with a twisty plot. Nicole Kidman's World War II-era widow starts questioning her sanity when her photosensitive children begin spying apparitions in their fog-enshrouded country house. So far, so typical, but there's more to this than meets the eye. And its BBFC 12 rating is very lenient – be wary of letting junior AV-Holics sit in on a screening!

Get it: Optimum's UK Blu-ray packs an evocative DTS-HD 5.1 mix, shadow-filled HD visuals and a few worthwhile (standard-def) extra features.

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HCC RATINGS KEY...

Outstanding	★★★★★
Above average	★★★★☆
Acceptable	★★★☆☆
Disappointing	★★★☆☆
Dire	★★★☆☆

All prices quoted are approximate and may have changed

TOP 10 Televisions

**Panasonic TX-65DX902B** → £3,300

★★★★★

This HDR-capable 65-incher wears its Ultra HD Premium certification with pride, and employs a full-array backlight to take control of its impressive luminance talents. Imagery is excellent; overall styling is appealing too. *HCC #259*



NEW ENTRY

LG OLED65E6 → £4,500 ★★★★★

Nominally a step-down from the Signature G6, but most will consider the tweaked bezel design and inferior sonics of this OLED worth settling for considering the price difference. *HCC #265*



NEW ENTRY

Samsung UE65KS9500 → £3,800 ★★★★★

Replacing the edge LED system of the KS9000 with a direct array yields illumination improvements. Colour-rich, super-bright visuals and smart design. Lacks 3D support. *HCC #265*

**LG OLED65G6** → £6,000 ★★★★★

An essential audition if your pockets are deep enough – this super-slim flat OLED TV combines the tech's PQ charms with a stunning design and nuanced sound performance. *HCC #264*

**Sony KD-75XD9405** → £5,000 ★★★★★

For this 75in HDR flagship, Sony adopts a full array LED backlight. The result is a step-up in image quality over smaller, edge-lit siblings. A big, bold – and expensive – TV. *HCC #261*

**Samsung UE55KS9000** → £2,100 ★★★★★

Samsung's quantum dot/edge LED 4K/HDR looker claims UHD Premium certification. Image quality is routinely great, but light banding can distract and 3D is absent. *HCC #260*



NEW ENTRY

Samsung UE55KS7000 → £1,300 ★★★★★

Straddling the world between genuine budget sets and more premium competitors, this 55-incher is perhaps Samsung's most appealing model. Impressive with both SDR and HDR. *HCC #265*

**Panasonic TX-50DX750** → £1,300 ★★★★★

Mid-range 4K/HDR LED TV. Not as impactful as its DX902 stablemate when it comes to pictures, but a neat design, fun UI and appealing screen size will win it plenty of fans. *HCC #260*

**Hisense 65XT910** → £2,300 ★★★★★

The Chinese marque throws down the UHD/HDR gauntlet to its better-known rivals with this big, well-priced, high-spec TV. Bright and clear images, but short on motion subtlety. *#257*

**Hitachi 49GHT69U** → £500 ★★★★★

49in 4K screen that could appeal to those on tight budgets. This £500 set offers a smattering of catchup, decent connectivity and a generally enjoyable image. No HDR support, though. *HCC #260*

TECH INFO: TELEVISIONS



What? No plasma?: The TV market is now dominated by LED-lit LCD screens. Manufacture and sale of plasma display panels (PDPs), which previously came into play above 42in, has ceased. With LED comes newer technologies. 4K models with a native resolution of 3,840 x 2,160 should at least be on your audition list if you're thinking of a new display; curved models are a consideration if you want to impress the neighbours. Look out for sets offering support for HDR content, which is part of the UHD Blu-ray spec.



Active or Passive: At the beginning of the 3D era, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver full-res images to each eye. Passive 3D TVs, which are now more common, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). The same halving occurs with a 4K screen. Some brands offer both Passive and Active models, depending on the panel used. Glasses-free 3D, heralded by Toshiba's early ZL2 TV, hasn't caught on. The tech is still being worked on, though.

TOP 5 Blu-ray movies

**The Revenant**

Leonardo DiCaprio excels in this brutal period survival drama, and it arrives on UHD Blu-ray with an HDR 10 encode that relishes the naturally-lit cinematography. Masterful DTS-HD mix, too, but more extras would be nice.

★★★★★

**Batman v Superman: Dawn of Justice**

Either a brilliantly epic, Easter Egg-laden superhero fest, or an overwrought misfire from DC/Warner Bros. Either way, the Ultra HD Blu-ray release is a corker.

★★★★★

**The Jungle Book 3D**

Disney waves its live-action wand at Rudyard Kipling's famous tale of a boy and some beasts. Family fun that's stunning to look at (although the 3D presentation isn't as pleasing as its 2D partner).

★★★★★

**Zootropolis**

Disney's great run of CG 'toons continues in this layered, politically subversive animals-as-cops tale. The 2.40:1 image quality is simply gorgeous, while the DTS-HD MA 7.1 soundtrack bristles with activity.

★★★★★

**Captain America: Civil War**

The third standalone flick for Steve Rogers' baddie-battler is more of an Avengers ensemble (complete with Spider-Man!) that excels in every possible way. The BD has superb 2D/3D imagery and DTS-HD 7.1 sonics.

★★★★★

TOP 10 Blu-ray players

- 1 Panasonic DMP-UB900 → £600 ★★★★★**

Boom! The Ultra HD Blu-ray format gets an inspiring debut in Panasonic's multi-talented deck that offers welcome user tweaks and a sterling picture performance. Smart skills include 4K-enabled VOD apps. *HCC #259*
- 2 Oppo BDP-103D → £600 ★★★★★**

This deck adds Darbee Visual Presence processing to the already excellent AV skills of its BDP-103EU predecessor. Superb construction, usability and features/connections. *HCC #228*
- 3 Pioneer BDP-LX88 → £1,100 ★★★★★**

The Japanese corp returns to the disc-playing high-end with a universal deck that weighs more than your AVR and drips with user tweaks and processing features. Stonking performer. *HCC #246*
- 4 Oppo BDP-105D → £1,100 ★★★★★**

This heavyweight deck builds upon the premium picture performance of the BDP-103D with a wealth of audiophile upgrades – if you're serious about music, check it out. *HCC #234*
- 5 Sony UHP-H1 → £400 ★★★★★**

Likely to be its last top-line BD deck before Sony embraces UHD, this player pleases with wide-ranging audio support (including DVD-A!), exquisite construction and slick performance. *HCC #261*
- 6 Arcam FMJ UDP411 → £1,200 ★★★★★**

Pristine visuals – including upscaled SD – and a classy sonic performance grant this Arcam instant appeal. The design and build is commensurate with the premium price tag. *HCC #244*
- 7 Sony BDP-S7200 → £180 ★★★★★**

A Sony deck without the curious angular design, the BDP-S7200 offers SACD support, hi-res audio streaming and 4K upscaling that's worth investigation. Not too pricey, either. *HCC #239*
- 8 Cambridge Audio CXU → £900 ★★★★★**

Styled to match the brand's other CX components, this universal deck matches its audio and video chops with plenty of features, including Darbee and HDMI switching. *HCC #253*
- 9 Samsung UBD-K8500 → £430 ★★★★★**

Ultra HD Blu-ray player that'll find fans courtesy of its sensible price point, connected smarts and eye-catching visuals. Build quality is a little uninspiring. *HCC #260*
- 10 Samsung BD-J7500 → £150 ★★★★★**

This well-priced spinner offers twin HDMI outputs and multichannel phono audio for flexible system hookup, an appealing design, smart features and solid AV chops. *HCC #247*

TECH INFO: BLU-RAY PLAYERS

Matching your deck to your AV receiver: Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D/4K/HDR output signals, in which case you'll need a deck with dual HDMI outputs – one channelling audio to your receiver amp, the other piping video direct to your TV.

What about the PlayStation?: Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £150 PS3 Super Slim makes a decent choice – especially if you like playing games. Control via a joypad is a pain, though, and the console runs more noisily than most BD spinners. The more expensive PS4 is a much better gaming machine, and now available in a ITB version.



DEMO DELIGHT

Batman v Superman: Dawn of Justice: Zack Snyder's dark and stylised photography looks pretty spiffy on Warner's Ultra HD Blu-ray release, with both the resolution uptick and HDR grading resulting in a finely-etched image with explosive contrast.



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TOP 10 Projectors

**Sony VPL-VW520ES** → £8,800

★★★★★

The top dog in Sony's domestic SXRD projector range, this couples native 4K optics with HDR compatibility for a state-of-the-art performance. Capable of jaw-dropping imagery and offers plenty of install flexibility. *HCC #254*

**JVC DLA-X7000** → £5,700 ★★★★★

With contrast and brightness improvements over the more affordable DLA-X5000, this is a great bigscreen option, although its SDR performance impresses more than HDR. *HCC #259*

**Sony VPL-HW45ES** → £1,850 ★★★★★

The most affordable model in Sony's home cinema range, the Full HD-resolution 45ES features excellent light management for a routinely cinematic image. Great value. *HCC #263*

**Epson EH-TW7200** → £1,800 ★★★★★

Priced to appeal to those unable to dabble in the £3,000 market, Epson's mid-ranger is a great purchase. No frame interpolation on offer, but colours, contrast and brightness impress. *HCC #232*

**ViewSonic Pro7827HD** → £600 ★★★★★

Pictures impress from this single-chip DLP budget option that carries a third HDMI input designed for smart sticks. Includes ISF calibration and 12V trigger. 3D spex are an optional extra. *HCC #261*

**JVC DLA-X5000** → £4,000 ★★★★★

Fourth-gen eShift projector marries its pixel-shifting talents with a contrasty performance, HDR support and HDMI 2.0a. Not the smoothest with motion, and price tag is considerable. *HCC #257*

**Optoma GT5000** → £1,000 ★★★★★

Ultra short-throw model with healthy brightness that makes sense for regular living rooms where a traditional install isn't possible. Casts Full HD images from just 30cm. *HCC #261*

**BenQ W2000** → £800 ★★★★★

Average black-level performance limits this model's all-round appeal, but elsewhere this Full HD DLP budget PJ catches the eye with its calibration options and detailed visuals. *HCC #257*

**Optoma HD27** → £800 ★★★★★

Another budget beamer where black levels aren't exemplary, but there's plenty to like here including the small form factor and vibrant colours. Limited zoom of 1.1x. *HCC #264*

**Philips Screeneo 2.0** → £1,500 ★★★★★

Philips retools its ultra short-throw PJ to now offer a Full HD resolution. Enjoyable imagery and easy setup, but some may miss the media player/LED lamp of its predecessor. *HCC #262*

TECH INFO: PROJECTORS



Installation: Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

Throw distance: Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

Throw ratio: Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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TOP 10 Speakers


- 


1 Monitor Audio Gold 300AV → £7,150 ★★★★★
MA revamps its Gold Series and we pay serious attention. This big-ticket package excels across the frequency range, offers exquisite design and packs setup flexibility via the dipole/monopole FX surrounds. *HCC #251*
- 


2 Q Acoustics 3000 5.1 Cinema Pack → £700 ★★★★★
A superior compact package with driver improvements over the previous 2000i series. The two-way cabinets and dual-driver sub combine to offer impressive audio for the money. *HCC #247*
- 


3 XTZ Cinema Series 5.1.4 → £3,700 ★★★★★
Spectacular dynamics, gut-thumping bass and a sense of scale that most systems at this price only dream of – XTZ's 3D audio-ready setup is an easy recommendation. *HCC #259*
- 


4 KEF R Series 7.1 → £6,500 ★★★★★
A 7.1 array mixing dipolar and direct surrounds, this authoritative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. *HCC #217*
- 

5 Monitor Audio Bronze B5 AV → £1,500 ★★★★★
Like their Gold siblings, these feature switchable surround speakers and MA's C-CAM drivers. Smaller in stature and output, but eminently more affordable. *HCC #254*
- 

6 Wharfedale Diamond 220 HCP → £850 ★★★★★
This package offers a lot for less than a grand – two-way surrounds, a potent three-driver centre channel and agile subwoofer. Great movie sound and excellent build. *HCC #248*
- 

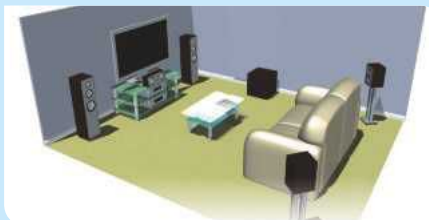
7 ELAC Debut 5.1.2 → £1,950 ★★★★★
Well-priced floorstanding Atmos system that manages to balance subtlety and precision with an exciting delivery. Subwoofer includes app-based room EQ. *HCC #262*
- 

8 DALI Opticon 5.1 → £3,200 ★★★★★
The Opticons employ driver designs created for DALI's higher-end models, and showcase a talent for both involving music presentation and high-octane home cinema. *HCC #260*
- 

9 Dynaudio Emit 5.1 → £3,200 ★★★★★
Entry-level for Danish brand Dynaudio – still a hefty chunk for a 5.1 array. What the money gets you is a wonderfully natural and cohesive soundstage and stonking build quality. *HCC #263*
- 

10 Q Acoustics Concept 5.1 Cinema Pack → £1,750 ★★★★★
Step-up Q Acoustics offering with handsome floorstanders joined by standmount surrounds employing the Concept Gelcore construction. Classy, consistently neutral performance. *HCC #257*

TECH INFO: SPEAKERS



Centre speaker: Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

Front speakers: Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

Subwoofer: Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

Surrounds: Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 array.

DEMO DELIGHT

Deadpool: A bonus treat for buyers of this flick on Ultra HD Blu-ray (as it's not included on the 1080p platter) is Fox's first Dolby Atmos track. The soundmix keeps pace with *Deadpool*'s visceral, kinetic approach, proffering hyperactive effects placement, appreciable soundstage depth and a rich, boisterous LFE channel.

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TOP 10 AV Receivers/AV Processors

**Anthem MRX 1120** → £4,000

★★★★★

Combining Anthem's superb ARC room EQ system with 11-channel amplification makes this an essential consideration for full-spec Atmos setups. Muscular, precise sound. No networking skills, though. *HCC #265*

**Denon AVR-X7200WA** → £2,500 ★★★★★

Now upgraded to DTS:X, and sporting HDCP 2.2 support, this Atmos AVR is as futureproofed as it gets. Only a nine-channel design, though. *HCC #248*

**Arcam AVR850** → £4,500 ★★★★★

High-end seven-channel AVR marrying Class G amplification and Atmos (and future DTS:X) support with talented Dirac Live Room EQ. 11-channel pre-outs for full-fat setups. *HCC #257*

**Marantz AV8802A** → £3,350 ★★★★★

This 11.2-channel next-gen processor (Atmos, DTS-X and Auro-3D) is an obvious upgrade for a high-performance separates system. Luxuriant, natural sound quality. *HCC #253*

**Trinnov Audio Altitude32** → £27,000 ★★★★★

Capable of outputting 32 discrete channels and mapping Dolby Atmos, DTS:X and Auro-3D sources to any setup via advanced EQ. Only premium cinema owners need apply, though. *HCC #262*

**Denon AVR-X2300W** → £500 ★★★★★

This almost entry-level Denon offers excellent value for money, with a well-balanced sound signature and bulging feature set. Seven-channel design won't suit all setups. *HCC #263*

**Yamaha RX-A3060** → £2,000 ★★★★★

New nine-channel flagship from Yamaha features excellent room EQ implementation, well-judged DSP modes, and an even-handed, effortless sound. *HCC #264*

**Pioneer VSX-1131** → £550 ★★★★★

Seven-channel model with Atmos and DTS:X support that features an overhauled remote control and UI to improve usability. Bass-rich, energetic sound. *HCC #265*

**Cambridge Audio CXR120** → £1,500 ★★★★★

This Brit-designed 7.2-channel receiver focuses on performance and ignores object-based audio and built-in Bluetooth. Sound quality is assured and construction is monstrous. *HCC #251*

**Onkyo TX-RZ800** → £1,050 ★★★★★

Feature-packed (DTS:X, HDCP 2.2) and sporting a new, clean design, Onkyo's mid-priced nine-channel AVR is easy to use and sounds sprightly, if a little short on aggression. *HCC #253*

TECH INFO: AV RECEIVERS



Tackling new heights: A recent innovation in AVR circles is the introduction of Dolby Atmos, the object-based sound format that has taken off in commercial cinemas and is supported in the home by the likes of Onkyo, Pioneer, Denon, Marantz and Yamaha. This requires new height speakers in addition to a regular 'flat' 5.1 or 7.1 speaker configuration. The heights can either be physically mounted in/on your ceiling, or provided via up-firing reflective models. Setup can be complex, but the results are certainly impressive. Atmos-encoded Blu-rays are a bit thin on the ground, but you can use Dolby Surround post-processing with regular 5.1/7.1 soundtracks to get the most from your new AVR/speakers. Rivals to Atmos are Auro-3D, which uses height speakers in a different configuration, and DTS:X. Most AVR brands have pledged support for the latter; software is beginning to arrive.

How much power?: Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

TOP 5 Bonus features

**The Trouble with Titian Revisited**

Arrow Video's Blu-ray of '60s Roger Corman horror *Blood Bath* includes four different cuts of the movie plus an 81-minute doc helping you make sense of its bizarre production history.

★★★★★

**Secrets of the Force Awakens...**

This 70-minute *Making of...* feature accompanying the latest *Star Wars* flick is essential viewing for franchise fans, going into detail about director JJ Abrams' production processes.

★★★★★

**Tales from the Bowling Alley**

Joining 88 Films' BD of *Sorority Babes in the Slimeball Bowl-O-Rama* is this monster 137-minute doc comprised of archival on-set footage. It even has its own optional chat track.

★★★★★

**The Life, Legacy and Legend of Don Borchers**

Brilliant documentary addition to the *Children of the Corn* Trilogy boxset focusing on the career of producer Don Borchers. Stuffed with insight, humour and Hollywood tales.

★★★★★

**The Long Way Home: Making The Martian**

The recent Extended Edition of the Ridley Scott sci-fi offers this excellent 79-minute documentary (directed by Charles de Lauzirika) that charts the movie's production.

★★★★★

TOP 10 Subwoofers

- 

SVS SB-2000 → £600 ★★★★★
This follow up to the SB-1000, which incorporates a new 12in driver and revamped Sledge DSP amplifier, offers immense value for money. A mid-sized woofer that imbibes your Blu-rays with potent LFE, the SB-2000 sounds quick and taut, and is a perfect introduction to what a truly good sub can accomplish. *HCC #233*
- 

REL 212SE → £2,750 ★★★★★
Lush design joins engineering nous in this premium sub with two active 12in drivers supported by a pair of passive radiators. Loud, deep and impactful, your BDs are in safe hands. *HCC #246*
- 

JL Audio Fathom f212v2 → £6,500 ★★★★★
A second-gen outing for JL's 2 x 12in monster, with an increase in power (now 3,600W) and improvements to the room EQ system among the changes. Sounds as good as you'd imagine. *HCC #261*
- 

REL S/3 SHO → £1,450 ★★★★★
The 10in, 400W S/3 is part of REL's revamped 'Super High Output' Serie S line. Performance is excellent, with speed, control and a scale bigger than you might expect. *HCC #264*
- 

Bowers & Wilkins PVID → £1,200 ★★★★★
One of the coolest-looking subs on the planet, B&W's PVID uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. *HCC #212*
- 

BK Electronics P12-300SB-DF → £475 ★★★★★
Bass heads can get outrageous value for money in the shape of BK's overperforming 12in sub. A front-firing model is also offered, and other finishes knock the ticket down to sub-£400. *HCC #247*
- 

ELAC SUB 2070 → £1,300 ★★★★★
A dual-driver, 600W sealed sub with control and onboard EQ system driven by a free Android/iOS app. Meaty, assured performance, with useful tweaks offered. *HCC #261*
- 

JL Audio Dominion d108 → £900 ★★★★★
Compact subwoofer that employs an innovative 8in driver (and a 500W amp) to go bigger and deeper than you might imagine. Compatible with JL Audio's JLink wireless system. *HCC #260*
- 

Eclipse TD520SW → £3,000 ★★★★★
This twin 8in woofer, driven by ICEpower amplification, aims for ultimate speed and tone – and succeeds. Simply put, the TD520SW is worth every penny of its asking price. *HCC #249*
- 

Artison Nano 1 → £800 ★★★★★
Artison's media room-friendly woofer tucks twin 6.5in bass drivers and a 300W amp into its compact frame. Bass extension isn't the deepest, but this is tight, fast and heaps of fun. *HCC #253*

TECH INFO: SPEAKERS



Why use more than one sub?: Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book *Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms* is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

DEMO DELIGHT

San Andreas: This brilliantly over-the-top SFX-heavy disaster flick magicks up a scenario where both downtown Los Angeles and San Francisco (not to mention the Hoover Dam) are hit by mega earthquakes, and its Atmos mix is subsequently loaded with LFE. Buildings topple and pavements tear apart with real fear-inducing weight, keeping your sub on its toes for much of the 110-minute running time.

TOP 5 Console games



Tom Clancy's The Division
Ubisoft's long-gestating online multiplayer RPG/shooter proves worth the wait, courtesy of its well-realised future New York environment, varied gameplay (including solo missions) and grin-inducing weaponry. ★★★★★



LEGO Star Wars: The Force Awakens
Brilliant arcade puzzler (with some light action) that makes great use of *Force Awakens'* set-pieces and chucks in other levels set further afield in the *Star Wars* universe. ★★★★★



Dead Souls III
Third-person action-filled fantasy sequel with excellent visuals (particularly the terrifying bosses) and improved game mechanics over previous entries in the franchise. Challenging – but rewarding – gameplay. ★★★★★



No Man's Sky
Massive, intergalactic exploration that feels like a cross between *Minecraft* and *Elite Dangerous*. Relaxed, absorbing gameplay with a gorgeous 50s/60s sci-fi aesthetic and beautiful orchestral score. Odd but fun. ★★★★★



Uncharted 4: A Thief's End
The final entry in this blockbuster franchise is simply epic, both in terms of gameplay (driving, puzzle-solving, stealth battles...) and the exquisite 1080p visuals. Roll on next year's movie adaptation! ★★★★★

TOP 10 Accessories

- 1 KEF R50 → £600 ★★★★★**
 KEF's Dolby Atmos-enabled reflective modules are a smart choice for anyone looking to beef up their speaker system. Using the company's Uni-Q point source drivers pays real dividends, enabling full-range sonics that reach deep into your cinema room. Styling and build quality are first rate. £600 gets you a pair – you'll soon want four... *HCC #252*
- 2 Amazon Fire TV 4K → £80 ★★★★★**
 Amazon reboots its media player to include 4K video prowess, greater storage capability and a souped-up engine. The result is an intuitive add-on that's ideal for 4K TV owners. *HCC #254*
- 3 Nvidia Shield Android TV → £150 ★★★★★**
 The Android TV platform gets the hardware it deserves – this stylish set-top box offers potent processing, resulting in a slick gaming and media playback experience. 4K capable. *HCC #262*
- 4 Asus RT-AC87U → £160 ★★★★★**
 A high-spec router can help you get the best from home media streaming – this feature-laden dual-band Asus impresses with speed and range and customisation options. *HCC #259*
- 5 QNAP HS-251 → £300 ★★★★★**
 Adding HDMI connectivity to a NAS device is surprisingly useful – and this slim-line model from QNAP is styled to grace your living room. Flawless media playback and responsive. *HCC #248*
- 6 Logitech Harmony Elite → £270 ★★★★★**
 Flexible and relatively easy to set up, this all-in-one remote package combines touchscreen handset and hub with smart device app. Worthwhile if you have a stacked kit rack. *HCC #256*
- 7 Xbox One S → From £250 ★★★★★**
 The retooled Xbox One adds Ultra HD Blu-ray playback, 4K streaming and HDR gaming to the feature list. Available in 500GB/1TB/2TB versions. Currently no Atmos/DTS:X. *HCC #264*
- 8 PSB Imagine XA → £350 ★★★★★**
 These two-way Dolby Atmos-enabled upfiring speakers are fairly chunky, but work well at creating a height layer and the £350-per-pair ticket makes them an enticing option. *HCC #264*
- 9 DVDO iScan Mini → £275 ★★★★★**
 HDMI 4K upscaler (using Silicon Image's VRS processing) that teases sharpness from HD and SD sources. A good fit for an entry-level or mid-range 4K TV. *HCC #264*
- 10 Devolo dLAN 550 Wi-Fi Starter Kit → £100 ★★★★★**
 Affordable Powerline option bringing stable data transmission (plus Wi-Fi) to an additional zone via mains wiring. Extra plugs sold separately for £60. Not the fastest around. *HCC #260*

TECH INFO: MEDIA PLAYERS



What about my TV?: Most flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Philips, Hisense, etc) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

Storage: You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

TOP 5 Blu-ray/DVD boxsets

**Gotham: The Complete Second Season**

The second helping of this pre-Batman TV series ups the number of loopy villains and retains the gorgeous set design. Solid AV quality across the four-disc BD package.

★★★★★

**Gomorrah: Complete Seasons 1 & 2**

Thrilling Italian crime drama based on the same book as the 2008 film. This seven-disc set changes the audio from LPCM 2.0 for S1 to DTS-HD 5.1 mixes for the second run.

★★★★★

**Ash vs The Evil Dead: The Complete First Season**

Bruce Campbell returns as Dead-ite slayer Ash in this splatstick series that serves as a perfect accompaniment to the *Evil Dead* movies. Powerful DD 5.1 mixes and fun extras.

★★★★★

**Dissent and Disruption: Alan Clarke at the BBC (1969-1989)**

Mega boxset with a mega price tag (£150) featuring a comprehensive collection of Clarke's work spread across 11 BDs and two DVDs.

★★★★★

**The Walking Dead: The Complete Sixth Season**

More zombie-killing antics from US network AMC, again shot on 16mm film and blessed with stomach-churning surround mixes. Plenty of extras to sink your teeth into, too.

★★★★★

TOP 10 Soundbars & Soundbases



Yamaha YSP-5600SW

→£1,900 ★★★★★

With its 46 drivers (including upfiring) this premium 'bar delivers precisely-steered and immersive audio, even of the Atmos variety. Potent wireless sub and 4K-capable HDMI switching sweeten the high-end deal. *HCC #254*



Canton DM55 →£330 ★★★★★

Canton's smallest soundbase still delivers big sonic thrills. Twin woofers underpin clean and crisp mids and highs, and build quality is first-rate. Doodle to use. Bluetooth built-in. *HCC #260*



Samsung HW-K950 →£1,300 ★★★★★

Soundbar with additional wireless rears and Dolby Atmos support via four upfiring drivers. Impressively largescale performance, good connectivity. No native DTS support. *HCC #263*



Sony HT-XT3 →£450 ★★★★★

A great-sounding soundbase blessed with HDMI connectivity, HDCP 2.2, Wi-Fi, Bluetooth, multiroom support, screen mirroring and app control. There's little to complain about. *HCC #250*



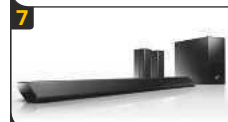
Geneva Model Cinema →£550 ★★★★★

The Swiss brand comes up trumps with this five-driver Bluetooth-capable soundbase. It musters a massive sound with huge dynamics, rich bass and articulate highs. *HCC #261*



Q Acoustics Media 4 →£330 ★★★★★

A no-nonsense offering from the speaker specialist, which ignores HDMI inputs and daft DSP modes in favour of creating a nuanced, solid 2.1 soundscape. *HCC #238*



Sony HT-RT5 →£500 ★★★★★

Sony joins the growing 'soundbar with wireless surrounds' market with an enjoyable debut that packs some worthwhile DSP modes and plenty of media-savvy functionality. *HCC #257*



DALI Kubik One →£800 ★★★★★

The Danish speaker brand brings a slice of glamour to your setup with this stylish soundbar. No HDMI or digital decoding but it packs a tight, lively and nuanced sound. *HCC #248*



Acoustic Energy Aego Sound3ar →£200 ★★★★★

Smallscale second-room option impresses with its punch and clarity, but a few EQ tweaks would have been nice. No HDMI connectivity. *HCC #264*



Orbitsound A70 →£500 ★★★★★

Not overly specified – there's no HDMI, for instance – but this elegant 'bar/sub combi just about justifies its price tag with an enveloping and very well-balanced performance. *HCC #251*

TECH INFO: TV PLATFORMS



TV addicts – go free, or pay-to-view?:

The analogue switch-off has created a competitive market in free-to-air platforms, while Sky and Virgin Media are squaring up to the likes of EE TV, Amazon Prime and Netflix. Deciding which service is right for you can be complex, and you may find your needs are best catered for by a combination.

Sky+HD: The long-running satcaster offers a plethora of HD channels, with content including recent movie releases, live sports and sought-after US shows. Hardware options include the 2TB dual-tuner PVR. Premium Sky Q service offers wireless multiroom and 4K content among its tricks.

Virgin Media TiVo: The cable giant offers a three-tuner PVR (1TB) with intelligent TiVo recording tricks, catch-up apps (including Netflix and Spotify), and over 240 channels (depending on package). Premium Sky content can be added on a monthly basis.

Freeview: Common option when it comes to TVs and STBs. Freeview offers 13 HD channels plus SD and radio. Freeview Play adds IPTV integration to the EPG – and you'll find it on Panasonic and Finlux TVs.

Freesat: Satellite service offering a similar – but not identical – channel lineup to Freeview, delivered via a dish but without a subs cost. Budget-priced STBs are available.

YouView: This relatively new kid on the block integrates the UK's main catchup portals directly into a backwards EPG. Again, channels are broadly similar to Freeview and there's no contract. Humax (PVRs) and Sony (TVs) are leading the hardware charge.

TOP 5 Back-catalogue Blu-rays



Bad Boys/Bad Boys II: 20th Anniversary Edition

The first time Michael Bay's brash sequel has been available on Blu (joined by the original). It arrives with an eye-popping HD image, zippy DTS-HD 5.1 mix and lots of archival extras.

★★★★★



Buster Keaton: Short Films 1917-1923

Four-disc BD set collecting 32 shorts (benefitting from new restorations) from the master of silent cinema. This £40 boxset houses some informative extras and a 184-page book!

★★★★★



Killer Dames: Two Gothic Chillers by Emilio Miraglia

Double bill of terrific '70s murder mysteries from the Italian giallo director bundled into a fan-pleasing set with chat tracks, featurettes, trailers, interviews and a 60-page booklet.

★★★★★



Highlander: 30th Anniversary Edition

Everyone's favourite flick about an immortal Scot with a headhunting hobby benefits from a 4K clean up – although grain is still heavy – and a decent bunch of bonus bits.

★★★★★



Citizen Kane: 75th Anniversary Edition

Warner's excellent 4K restoration of this classic flick gets a UK outing on a premium Blu-ray release – extras include commentary tracks, a 48-page book and more.

★★★★★

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TOP 5 PVRs



Virgin Media TiVo, £subscription

This triple-tuner PVR offers recording flexibility, useful features – you can undelete deleted shows! – and smart TiVo functionality. If you're in a cable area, consider it.

★★★★★



Sky Q, £subscription

Sky's new top-tier product offering dazzles with its image-rich user interface, wireless multiroom skills and recording flexibility delivered by the PVR's 12 tuners. Now supports 4K content.

★★★★★



Humax HDR-1100S, £190

Freesat Freetime PVR that impresses with its usability, VOD options and form factor – Humax's small, white box will slot into any kit rack. We tested the 500GB version – 1TB and 2TB models are also available

★★★★★



Humax DTR-T4000, £subscription

This YouView-based PVR is required to get BT Sport's new Ultra HD channel – available to those with BT fast fibre and a BT TV sub. Easy to use and with 1TB of storage

★★★★★



EE TV Smart Box, £subscription

This quad-tuner 1TB PVR, from the mobile/broadband corp, offers innovative Replay 24-hour channel recording and great Smart device streaming. Needs more catch-up though

★★★★★

TOP 5 Headphones



Sony MDR-HW700DS, £800

Comfy cans supplied with an HDMI surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late-night listening

★★★★★



Sony MDR-1ABT, £300

Another cracking Sony pair with a good sonic balance, here with integrated Bluetooth allowing for cable-free movie watching (although they can be used wired too). Large design perhaps not suited to travel

★★★★★



Lindy Cromo NCX-100, £100

A cost-effective domestic option and great for travelling, these noise-cancelling 'phones (which can also be used as a normal passive design) feature a pleasant, balanced sound

★★★★★



PSB M4U1, £220

Aimed at both home and on-the-move use (and supplied with a carry case and two cable options), the M4U1s offer solid bass response and impactful highs. Build quality is good, as is comfort

★★★★★



Bose QC35, £290

The latest in the QuietComfort range ditches the wired connection in favour of Bluetooth but retains Bose's luxurious styling and rich performance. Noise-cancelling mode is very efficient.

★★★★★

TOP 5 Wireless speakers



KEF Muo, £300

Portable Bluetooth speaker that's a cut above much of the competition. KEF's sonic knowhow results in a punchy, dynamic presentation that cherishes lossless rips. Excellent build quality

★★★★★



Sony SRS-X11, £60

An affordable palm-sized Bluetooth speaker with internal rechargeable battery, Sony's SRS-X11 is supremely portable and sounds decent for the money. A neat little gizmo. Get two and they can work in stereo

★★★★★



Samsung WAM7500, £500

Also known as the R7, this addition to Samsung's multiroom system delivers authentic omnidirectional sonics via its super-stylish oval-shaped enclosure. Expensive, but excellent

★★★★★



Simple Audio Listen, £400

Desktop stereo speakers with Bluetooth support, these benefit from separate tweeter/midbass units and a classy construction. Performance is well-balanced, and a subwoofer output is offered for extra bass

★★★★★



Star Wars Bluetooth speakers, £150 each

Bring a touch of fun to your tunes with these Stormtrooper and C-3PO replica Bluetooth speakers from ACWorldwide. Solid sound quality and gorgeous styling

★★★★★

HOME CINEMA

Choice

→ IN THE NEXT ISSUE

Ultra HD heroes We run the rule over another batch of 4K BD releases

Jingle all the AV way System add-ons and movie merch to stick in your Christmas stocking

Taking aim with Arrow Indie label talks Blu-ray

→ HARDWARE

Sony KD65ZD9BU Ultra HD TV **Wharfedale DX-1SE compact speaker pack** **Cabasse StreamBar SVS PC2000 subwoofer** **Hisense 75in 4K flagship**
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CONTENTS SUBJECT TO CHANGE – BUT ONLY FOR THE BETTER

ISSUE
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MEANWHILE IN VIRTUAL REALITY...



AV Avenger

It's third time lucky for **Steve May** as he finally finds some virtual reality experiences that don't make him feel bored, ill or stupid. No surprise that the BBC's R&D team is involved

2016 HAS BEEN exciting time for AV-Holics thanks to a whirlwind of HDR and 4K developments (with a side-dish of next-gen gaming machines). Yet amongst all this, I've spent a fair chunk of my time thinking about virtual reality, compelled to by a consumer electronics industry that seems obsessed with the new(ish) technology. Post CES, I wrote that 'I suspect VR is more theme park than home entertainment.' More recently, I checked out a VR attraction at an actual theme park, which wasn't entirely successful. Now, though, I'm beginning to think that – maybe – it could be a big deal with movies. It just needs the right creative people onboard...

Movie industry moving on?

Elliot Grove, movie producer and founder of the Raindance Film Festival, is unwavering. 'If I was getting into the movie business today,' he tells me, 'I'd forgo movies and go straight to VR.'

His enthusiasm is perhaps understandable – we're chatting at the opening of the Raindance VR Arcade, an offshoot of London's Raindance movie festival, after all. But it's still a bit of a bombshell.

'We opened for VR experiences for the first time this year, and had over 50 submitted,' says Grove. 'Our programming team picked 14. They're some of the best VR you'll see anywhere in the world.'

Ostensibly I'm here as a guest of Raindance sponsor Lexus. The luxury car maker is showing off a new hybrid, the LC500h (not in showrooms for another nine months or so) with a 13-speaker Mark Levinson sound system. Unfortunately it's a static display, so I can't immerse myself in the audio. I cautiously don VR goggles instead.

It turns out that Grove wasn't exaggerating about the quality of shorts on offer. *Notes on Blindness: Into Darkness* is based on theology professor John Hull's

audio diary, kept to document his loss of sight. It's a companion piece of sorts to the acclaimed feature-length doc by Peter Middleton and James Spinney, and depicts a world of blackness illuminated briefly by the shapes of people and objects. **Stroking the control pad of the Samsung Gear VR headset creates a virtual wind**, which causes motion and thus light. It's mesmeric.

Rather different is *Inside the Box of Kurios*, featuring Cirque du Soleil. Like some sort of Lynchian freak-show fantasy, eccentric stage performers and weird stage contraptions come at you from every direction. When some of these cast members get really close, it's difficult not to feel that your personal space is being invaded – two female performers definitely get a little too fresh.

6x9, by way of contrast, offers virtual reality solitary confinement. It sets out to recreate what it's like to be imprisoned, and is claustrophobic in the extreme. I almost had a private panic attack.

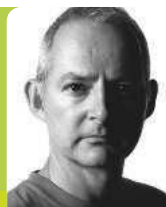
To my mind, the most successful, and ultimately joyous, Raindance VR entry came from the BBC's R&D team. *The Turning Forest* is a fantastical animation set in a magical wood. Using whimsical narration, it introduces a fantasy beast which literally takes you on a ride. There are elements of Miyazaki, and particularly *My Neighbor Totoro*, about the world and its creature, and I found it a genuine delight.

Certainly, the best Raindance VR shorts immerse not so much through their wraparound visuals, as the binaural sound they use – an interesting link between good VR and home cinema.

I guess when the likes of Raindance give 360-degree movie-makers a Weinstein-sized stamp of approval, it makes sense to listen up ■

Do you think VR has a future when it comes to movies? Let us know: email letters@homecinemachoice.com

Steve May is releasing a documentary about his conversion from VR hater to VR fan. But he'll only make it available on DVD



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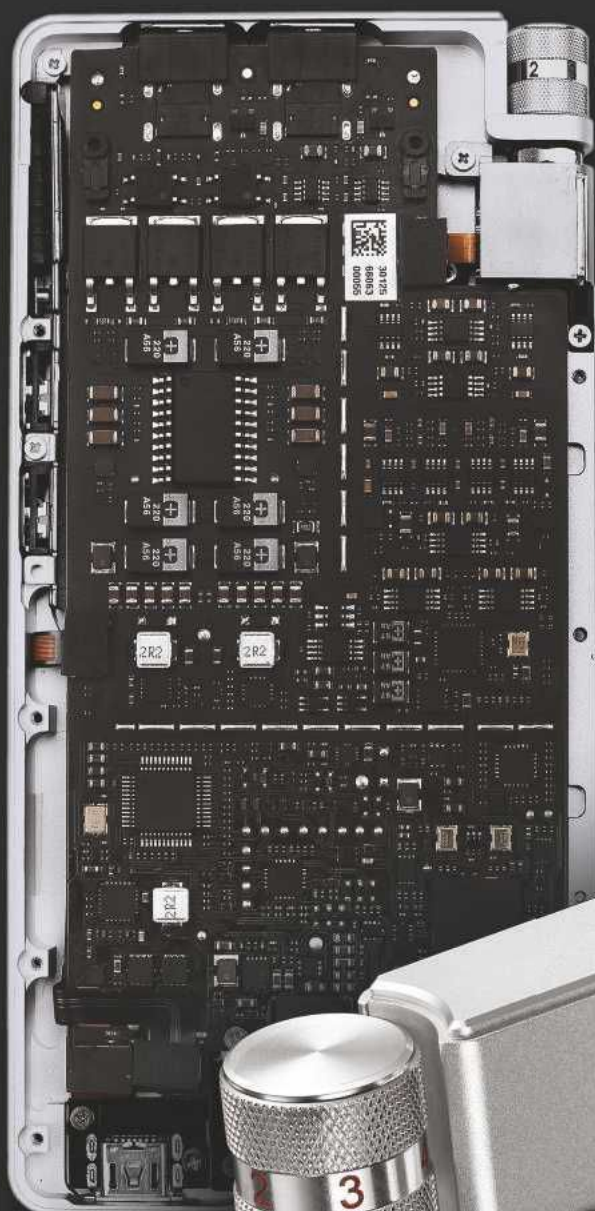
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